

FINAL

ENVIRONMENTAL ASSESSMENT

ADDRESSING A PROPOSED AIRFIELD DRAINAGE

IMPROVEMENT PROJECT

DOBBINS AIR RESERVE BASE, GEORGIA



NOVEMBER 2013

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 22 JAN 2014		2. REPORT TYPE Final		3. DATES COVERED -	
4. TITLE AND SUBTITLE Final Environmental Assessment Addressing a Proposed Airfield Drainage Improvement Project, Dobbins Air Reserve Base, Georgia				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Air Force Air Force Reserve Command 94th Airlift Wing				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 92	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FINAL
ENVIRONMENTAL ASSESSMENT (EA)
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR

PROJECT NUMBER: FGWB 04-0014

REPAIR AIRFIELD STORMWATER SYSTEM

DOBBINS AIR RESERVE BASE, GEORGIA

NOVEMBER 2013

FINAL
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

ENVIRONMENTAL ASSESSMENT FOR
PROJECT NUMBER: FGWB 04-0014
REPAIR AIRFIELD STORMWATER SYSTEM
DOBBINS AIR RESERVE BASE, GEORGIA

Pursuant to the Council on Environmental Quality's regulations for implementing procedural provisions of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] 1500–1508), U.S Air Force (USAF) regulations in 32 CFR Part 989, and Department of Defense Directive 6050.1, the 94th Airlift Wing (94 AW) has prepared a Draft Environmental Assessment (EA) to repair the airfield stormwater system at Dobbins Air Reserve Base (ARB), Georgia. The Draft EA is incorporated by reference into this Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA).

INTRODUCTION

Dobbins ARB is proposing to repair the existing airfield stormwater system. The Proposed Action is required because the current stormwater system has exceeded its design useful life cycle.

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to repair and improve stormwater drainage and minimize the attraction of birds to the airfield of a mission critical military installation.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The Proposed Action will repair manholes, cave-ins around stormwater Grate Inlets in the infield areas, and other appurtenances as required. Additionally, the Proposed Action will eliminate all headwalls and stand pipes from clear zone areas at the end of the runway.

This EA evaluates the Proposed Action and Alternatives. In addition, the No Action Alternative was evaluated. Under the No Action Alternative Dobbins ARB would not repair the airfield stormwater system. The increased storm water runoff, severe erosion, pipe separation, leaking joints, and collapsing headwalls would continue. This alternative would not satisfy USAF mission and flight safety requirements at Dobbins ARB. Based on these considerations, only the Proposed Action is carried forward in this document.

SUMMARY OF ANTICIPATED ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED ACTION AND THE NO ACTION ALTERNATIVE

In compliance with NEPA, CEQ guidelines, and 32 CFR Part 989, the evaluation of potential environmental impacts presented in the EA focuses on those resources and conditions potentially subject to impacts and on potentially significant environmental issues deserving of study, and deemphasizes insignificant issues. The environmental resources that were analyzed in this EA includes air quality,

noise, land use, geological resources, water resources, biological resources, cultural resources, infrastructure, hazardous materials and wastes, safety, and socioeconomic and environmental justice.

Implementation of the Proposed Action would result in negligible to minor impact on water resources. These impacts will be minimized by strict adherence to conditions set forth in USACE Permit SAS-2010-00461(Appendix B). No significant impacts would occur on air quality, noise, land use, geological resources, biological resources, safety, socioeconomic and environmental justice, cultural resources, infrastructure, hazardous materials, and wastes. In addition, no significant cumulative impacts would occur under the Proposed Action.

Under the No Action Alternative, the Proposed Action would not be implemented. The No Action Alternative would produce no significant impacts on environmental resources.

PUBLIC REVIEW AND INTERAGENCY COORDINATION

Dobbins ARB initiated the Interagency and Intergovernmental Coordination for the Environmental Planning (IICEP) process for the Proposed Action on 20 September 2012, in accordance with USAF policy. A 30-day public and agency review of the Description of Proposed Action and Alternatives for this EA was conducted prior to finalizing this EA.

A Notice of Availability (NOA) for this EA was published in local newspapers. The published NOA solicited comments on the Proposed Action and was intended to involve the local community in the decision making process. Comments received from the public and other Federal, state, and local agencies will be addressed in the EA. Public and agency comments on the Draft EA will be considered prior to a decision made as to whether or not to sign a FONSI.

Finding of No Practicable Alternative

It is USAF policy to avoid constructing new facilities within areas containing wetlands, where practicable. However, the Proposed Action would directly impact Wetland W-111b. Reasonable alternatives and all practical measures to minimize harm to wetlands and the environment in general were considered, but no other alternatives met the operational requirements of the 94 AW. Wetland impacts are reduced to the maximum extent possible through strict adherence to conditions set forth in USACE Permit SAS-2010-00461. In brief, the USAF will:

1. Purchase 2.4 wetland mitigation credits from the United States Army Corps of Engineers (USACE) approved wetland mitigation bank servicing Dobbins ARB.
2. Provide USACE documentation of purchase prior to any work.

Pursuant to Air Force Instruction 32-7064, Integrated Natural Resources Management, Executive Order 11988, Floodplain Management, and the authority delegated by Secretary of the Air Force Order 791.1, Environment, and taking the above information into account, I find that there is no practicable alternative to this action and that the Proposed Action includes all practicable measures to minimize harm to the environment. This decision has been made after taking into account all submitted information, and considering a full range of practical alternatives that would meet project requirements and are within the legal authority of the USAF.


ROY ALAN C. AGUSTIN, Col, USAF
The AFRC Civil Engineer

15 November 2013
Date

Finding of No Significant Impact

Based on the information and analysis presented in the EA conducted in accordance with the requirements of the National Environmental Policy Act, the CEQ Regulations, implementing regulations set forth in 32 CFR 989 (EIAP), as amended, and after a review of the agency comments submitted during the 30-day public comment period, I conclude that the environmental effects of the proposed repair of the airfield stormwater system are not significant, that preparation of an Environmental Impact Statement is not necessary, and that a FONSI is appropriate. The preparation of the EA is in accordance with NEPA, Council on Environmental Quality regulations, and 32 CFR Part 989, as amended.


BRETT J. CLARK, Colonel, USAFR
Commander, 94th Airlift Wing, Dobbins ARB GA

22 Jan 14
Date

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1.	ENVIRONMENTAL COMPLIANCE REQUIREMENTS.....	1
1.2.	PUBLIC INVOLVEMENT	2
2.	PURPOSE AND NEED FOR ACTION	3
3.	DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA)	4
3.1.	PROPOSED ACTION	4
3.2.	ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS	4
3.3.	NO ACTION ALTERNATIVE	4
4.	DESCRIPTION OF THE AFFECTED ENVIRONMENT	5
4.1.	AIR QUALITY	5
4.1.1.	DEFINITION OF RESOURCE	5
4.1.2.	AFFECTED ENVIRONMENT	6
4.1.3.	TABLE 4-1. LOCAL AND REGIONAL AIR EMISSIONS INVENTORY FOR THE PROPOSED ACTION (2002)	6
4.2.	NOISE	7
4.2.1.	DEFINITION OF THE RESOURCE.....	7
4.2.2.	AFFECTED ENVIRONMENT	8
4.3.	LAND USE	8
4.3.1.	DEFINITION OF THE RESOURCE.....	8
4.3.2.	AFFECTED ENVIRONMENT	9
4.4.	GEOLOGICAL RESOURCES	9
4.4.1.	DEFINITION OF THE RESOURCE.....	9
4.4.2.	AFFECTED ENVIRONMENT	10
4.5.	WATER RESOURCES	11
4.5.1.	DEFINITION OF THE RESOURCE.....	11
4.5.2.	AFFECTED ENVIRONMENT	14
4.6.	BIOLOGICAL RESOURCES.....	15
4.6.1.	DEFINITION OF THE RESOURCE.....	15
4.6.2.	AFFECTED ENVIRONMENT	16

4.7.	CULTURAL RESOURCES	18
4.7.1.	DEFINITION OF THE RESOURCE.....	18
4.7.2.	AFFECTED ENVIRONMENT	18
4.8.	INFRASTRUCTURE	19
4.8.1.	DEFINITION OF THE RESOURCE.....	19
4.8.2.	AFFECTED ENVIRONMENT	20
4.9.	HAZARDOUS MATERIALS AND WASTES	25
4.9.1.	DEFINITION OF THE RESOURCE.....	25
4.9.2.	AFFECTED ENVIRONMENT	26
4.10.	SAFETY.....	29
4.10.1.	DEFINITION OF THE RESOURCE.....	29
4.10.2.	AFFECTED ENVIRONMENT	29
4.11.	SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE	30
4.11.1.	DEFINITION OF THE RESOURCE.....	30
4.11.2.	AFFECTED ENVIRONMENT	31
4.11.3.	TABLE 4-2. POPULATION DATA FOR 2000 AND 2010	32
5.	IMPACTS OF PROPOSED ACTION ON THE ENVIRONMENT	34
5.1.	AIR QUALITY	35
5.2.	AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE.....	35
5.3.	NOISE	35
5.4.	LAND USE	36
5.5.	GEOLOGICAL RESOURCE	36
5.6.	WATER RESOURCES	37
5.7.	BIOLOGICAL RESOURCES.....	37
5.8.	CULTURAL RESOURCES	37
5.9.	INFRASTRUCTURE RESOURCES	37
5.10.	HAZARDOUS MATERIALS AND WASTE.....	38
5.11.	SAFETY.....	38
5.12.	SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE	38
5.13.	SAFETY AND OCCUPATIONAL HEALTH.....	38
5.14.	HAZARDOUS MATERIALS/WASTE	38
5.15.	BIOLOGICAL RESOURCES.....	39

5.16.	CULTURAL RESOURCES	39
5.17.	GEOLOGY AND SOILS.....	39
5.18.	SOCIOECONOMIC.....	39
6.	Cumulative and Other Potential Adverse Impacts.....	40
6.1.	PROJECTS IDENTIFIED FOR POTENTIAL CUMULATIVE EFFECTS.....	40
6.2.	RESOURCE-SPECIFIC CUMULATIVE EFFECTS	43
6.2.1.	PROPOSED ACTION	43
6.2.2.	NO ACTION ALTERNATIVE	46
6.2.3.	UNAVOIDABLE ADVERSE EFFECTS	46
6.2.4.	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES.....	47
7.	References	50
8.	APPENDICES	54

THIS PAGE INTENTIONALLY LEFT BLANK

1. INTRODUCTION

The purpose of this Environmental Assessment (EA) is to evaluate the Proposed Action to Repair Airfield Stormwater System at Dobbins ARB, GA (Repair Airfield Stormwater System, FGWB 04-0014).

Dobbins ARB is located in Marietta, GA and was built in 1943. Dobbins ARB consist of 1,666 acres in Cobb County in northwestern Georgia, about 16 miles northwest of the City of Atlanta. The 94th Airlift Wing is the host unit at Dobbins ARB. The 94th Airlift Wing is made up of 3 groups, 10 squadrons, and 5 flights; flying operations are conducted by the 94th Operations Group. Additional units based at Dobbins ARB include the Georgia Army National Guard, Georgia Air National Guard, and the U.S. Army Reserve. As such, Dobbins ARB one of the largest multi-service reserve training installations in the world.

The airfield was raised approximately fifty vertical feet during earlier construction and an existing stream was rerouted or piped to downstream outfalls. The main storm drainage systems have been in place for nearly 66 years. Over the years, Dobbins ARB and Lockheed Martin (LM) have constructed new buildings, parking lots, and roads that have increased runoff to the main storm drainage systems, as well as the contributing systems throughout the Base and Airfield.

1.1. ENVIRONMENTAL COMPLIANCE REQUIREMENTS

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] §§1500-1508), and 32 CFR 989, et seq., Environmental Impact Analysis Process (formerly promulgated as Air Force Instruction (AFI) 32-7061), Dobbins ARB has prepared this EA in order to consider the potential consequences to the human and natural environment that may result from implementation of the Proposed Action.

NEPA requires federal agencies to take into consideration the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. The CEQ was established under NEPA to implement and oversee federal policy in this process. The CEQ subsequently issued the Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Sections 1500–1508) (CEQ 1978).

The Proposed Action constitutes a federal action and therefore must be assessed in accordance with NEPA. This EA evaluates the potential environmental impacts associated with the Proposed Action.

EO 12372, *Intergovernmental Review of Federal Programs* and AFI 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning* (IICEP) require intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the IICEP, the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a proposed action. Comments from these agencies are

subsequently incorporated into the EA. Appendix A provides letters and communications to and from government entities for this EA.

This EA examines the potential effects of the Proposed Action and alternatives on 11 resource areas: noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomic resources and environmental justice, infrastructure, hazardous materials and wastes, and safety. The cumulative impacts analysis includes on-installation projects associated with the Proposed Action and other on-installation and off-installation projects.

1.2. PUBLIC INVOLVEMENT

A Notice of Availability (NOA) will be published in the Marietta Daily Journal and the Atlanta Journal Constitution newspapers. The NOA will announce that the Draft EA will be available to the public for a 30-day review and comment period. The NOA will be issued to solicit comments on the Proposed Action and involve the local community in the decision making process. Public and agency comments on the Draft EA will be considered prior to a decision being made as to whether or not to sign a FONSI.

2. PURPOSE AND NEED FOR ACTION

An EA is required to evaluate the Proposed Action. The Buried Stormwater Infrastructure, which in many sections of the Airfield has reached or exceeded its designed useful life cycle. Airfield has been in use for over 70 years, and the runways and taxiways have been lengthened and facilities expanded multiple times, the storm water runoff has been greatly increased, the existing outfall system cannot adequately handle the flows. This has resulted in severe erosion at ends of pipes, pipe separation, and collapsing headwalls. Furthermore, many sections of the trunk system are Corrugated Galvanized Steel Pipes (CMP) that has rusted to a point they have no inverts. Sections of the Reinforced Concrete Pipes (RCP) have joint separations, leaking joints, and longitudinal pipe failures. There are sections of pipes that are full of sediment and need cleaning and further inspection.

Repair of the drainage system is required to prevent further deterioration, increase capacities, reduce erosion problems, and reduce future maintenance cost. Additionally the repair will minimize any standing water problems on the runway or water impoundments in the infield area that attract birds which are a hazard to aircraft.

3. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA)

3.1. PROPOSED ACTION

The Proposed Action is to repair the stormwater drainage systems throughout the airfield on Dobbins ARB. This includes all work necessary to repair the stormwater drainage systems throughout the Airfield on Dobbins ARB. The Proposed Action includes repair of manholes, cave-ins around stormwater Grate Inlets in the infield areas, and other appurtenances as required. The project will also eliminate all headwalls and stand pipes from the clear zone.

3.2. ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Two alternatives have been considered to determine the preferred action. Each alternative was considered for the following: Ability to meet drainage objectives, ease of maintenance, and impact to water quality.

The first Alternative is to re-direct surface and subsurface waters away from Big Lake and Wetland W-111b. This option would alleviate the water quality and storm water detention that Big Lake is currently providing. Big Lake is acting as a water quality and detention facility. If stormwater is allowed to bypass Big Lake, the water quality downstream may exceed the Nephelometric Turbidity Units (NTU) value required by local and state agencies. Also, if the storm water leaving the airfield basins is not detained in Big Lake, the stormwater flow rate could be detrimental to downstream basins; it could cause flooding on and off the installation. Consequently, this Alternative was eliminated from further analysis in this EA.

3.3. NO ACTION ALTERNATIVE

The second alternative considered is the No Action Alternative. 40 CFR Section 1502.14(d) specifically requires analysis of a “No Action” alternative in all NEPA documents. Under the No Action Alternative Dobbins ARB would not repair the airfield stormwater system. The increased storm water runoff, severe erosion, pipe separation, leaking joints, and collapsing headwalls would continue. This alternative would not satisfy USAF mission and flight safety requirements at Dobbins ARB. Based on these considerations, only the Proposed Action is carried forward in this document.

4. DESCRIPTION OF THE AFFECTED ENVIRONMENT

All potentially relevant resource areas were initially considered for analysis in this EA. In compliance with NEPA and CEQ guidelines, the affected environment is discussed in this section and only those resource areas considered potentially significant are discussed in here. This section includes air quality, noise, land use, geological resources, water resources, biological resources, cultural resources, infrastructure, hazardous materials and wastes, safety, and socioeconomic and environmental justice.

4.1. AIR QUALITY

4.1.1. DEFINITION OF RESOURCE

In accordance with Federal Clean Air Act (CAA) requirements, the air quality in a given region or area is measured by the concentration of criteria pollutants in the atmosphere. The air quality in a region is a result of not only the types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological “air basin,” and the prevailing meteorological conditions.

Ambient Air Quality Standards. Under the CAA, the U.S. Environmental Protection Agency (USEPA) developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS represent the maximum allowable concentrations for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [PM₁₀] and particulate matter equal to or less than 2.5 microns in diameter [PM_{2.5}]), and lead (Pb) (40 CFR Part 50). The CAA also gives the authority to states to establish air quality rules and regulations. The State of Georgia has adopted the NAAQS for federally listed criteria pollutants with the exception of some SO₂ standards.

Attainment versus Nonattainment and General Conformity. The USEPA classifies the air quality in an air quality control region (AQCR), or in subareas of an AQCR, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are therefore designated as either “attainment,” “nonattainment,” “maintenance,” or “unclassified” for each of the six criteria pollutants. Attainment means that the air quality within an AQCR is better than the NAAQS; nonattainment indicates that criteria pollutant levels exceed NAAQS; maintenance indicates that an area was previously designated nonattainment but is now attainment; and an unclassified air quality designation by USEPA means that there is not enough information to appropriately classify an AQCR, so the area is considered attainment. USEPA has delegated the authority for ensuring compliance with the NAAQS in the State of Georgia to the Georgia Department of Natural Resources. In accordance with the CAA, each state must develop a State Implementation Plan (SIP), which is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS.

The General Conformity Rule applies only to significant actions in nonattainment or maintenance areas. The General Conformity Rule requires that any Federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a Federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS.

4.1.2. AFFECTED ENVIRONMENT

The Proposed Action is in Cobb County, Georgia, which is within the Metropolitan Atlanta AQCR. The Metropolitan Atlanta AQCR also includes Butts, Carroll, Clayton, Coweta, De Kalb, Douglas, Fayette, Fulton, Gwinnett, Heard, Henry, Lamar, Meriwether, Pike, Rockdale, Spalding, Troup, and Upson counties in Georgia (USEPA 2011b). Cobb County has been designated by the USEPA as unclassified/attainment for CO, NO₂, SO₂, Pb, and PM₁₀. Cobb County has been designated as nonattainment for PM_{2.5}, moderate nonattainment for 8-hour O₃, and maintenance for 1-hour O₃ (USEPA 2011c).

The most recent emissions inventory for Cobb County and the Metropolitan Atlanta AQCR are shown in Table 4-1. Cobb County is considered the local area of influence, and the Metropolitan Atlanta AQCR is considered the regional area of influence for this air quality analysis. O₃ is not a direct emission; it is generated from reactions of volatile organic compounds (VOCs) and nitrogen oxides (NO_x), which are precursors to O₃. Therefore, for the purposes of this air quality analysis, VOCs and NO_x emissions are used to represent O₃ generation.

4.1.3. TABLE 4-1. LOCAL AND REGIONAL AIR EMISSIONS INVENTORY FOR THE PROPOSED ACTION (2002)

Area	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO₂ (tpy)	PM₁₀ (tpy)	PM_{2.5} (tpy)
Cobb County	20,872	22,492	129,676	25,972	17,573	3,892
Metropolitan Atlanta AQCR	161,849	150,101	890,752	178,961	165,459	34,875

Source: USEPA 2008

Dobbins ARB currently holds an approved synthetic minor air operating permit with the Georgia Department of Natural Resources (GADNR). This permit contains operational limits in order for emissions from the facility to remain below the Title V operating permit thresholds. Any new stationary sources added to Dobbins ARB would need to be evaluated as to whether they would affect compliance with this permit. In addition, new sources could be added to this permit through approval by GADNR. (Dobbins ARB 2011c)

4.2. NOISE

4.2.1. DEFINITION OF THE RESOURCE

Federal Regulations

OSHA Standards. The Federal government has established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. Under the Noise Control Act of 1972, the Occupational Safety and Health Administration (OSHA) established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed is 115 dBA and exposure to this level must not exceed 15 minutes within an 8-hour period. The standards limit instantaneous exposure, such as impact noise, to 140 dBA. If noise levels exceed these standards, employers are required to provide hearing protection equipment that will reduce sound levels to acceptable limits (29 CFR Part 1910.95).

DOD Guidelines. Sound levels, resulting from multiple single events, are used to characterize noise effects from aircraft or vehicle activity and are measured in Day-Night Average Sound Level (DNL). The DNL noise metric incorporates a “penalty” for nighttime noise events to account for increased annoyance. DNL is the energy-averaged sound level measured over a 24-hour period, with a 10-dBA penalty assigned to noise events occurring between 10:00 p.m. and 7:00 a.m. DNL values are obtained by averaging sound exposure levels over a given 24-hour period. DNL is the designated noise metric of the Federal Aviation Administration (FAA), U.S. Department of Housing and Urban Development (HUD), USEPA, and DOD for modeling airport environments.

According to the USAF, the FAA, and the HUD criteria, residential units and other noise-sensitive land uses are “clearly unacceptable” in areas where the noise exposure exceeds 75 dBA DNL, “normally unacceptable” in regions exposed to noise between 65 and 75 dBA DNL, and “normally acceptable” in areas exposed to noise of 65 dBA DNL or less. The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of a DNL sound level (FICON 1992). For outdoor activities, the USEPA recommends 55 dBA DNL as the sound level below which there is no reason to suspect that the general population would be at risk from any of the effects of noise (USEPA 1974).

State Regulations. The State of Georgia does not have a comprehensive noise control regulation (State of Georgia 2011). Therefore, the sound level limits contained in the Cobb County or City of Marietta Code of Ordinances would apply to the Proposed Action.

Local Regulations. Noise regulations for Cobb County are contained in Chapter 50, Article VII of the Cobb County Code of Ordinances. Per the ordinance, “loud noise” from construction activities (e.g., pile driver, pneumatic hammer, electric saws, and drills) are only permitted between 7:00 a.m. and 9:00 p.m., Monday through Saturday (Cobb County 2010).

Noise regulations for the City of Marietta are contained in Chapter 10-6 of the Marietta Code of Ordinances. Per the ordinance, operation of any sound-producing source cannot exceed the following limits (City of Marietta 2009). However, these sound level limits could be exceeded if a special administrative permit is obtained.

- At the boundary of a residential, public space, institutional, commercial, or business area, sound levels cannot exceed 65 dBA between 7:00 a.m. and 11:00 p.m., and 60 dBA between 11:00 p.m. and 7:00 a.m.
- At the boundary of an industrial or manufacturing area, sound levels cannot exceed 70 dBA at any time.

In addition, construction activities within 1,000 feet of any residential area are not permitted between 7:00 p.m. and 7:00 a.m. or anytime on Sundays. However, a permit may be granted for construction activities during these times if the city engineer determines that these activities would not impair the public's health or safety (City of Marietta 2009).

4.2.2. AFFECTED ENVIRONMENT

The ambient noise environment throughout Dobbins ARB is affected mainly by aircraft operations and automobile traffic, with military aircraft operations being the primary sound sources. Flying units at Dobbins ARB include the 94th Airlift Wing of AFRC, the Georgia Army National Guard (GAARNG), and the U.S. Army Reserve. In addition, aircraft from AFP-6 fly out of Dobbins ARB. Aircraft include the C-130, UH-60, and UH-72; and the C-5, F-22, and C-130 aircraft delivered by AFP-6.

Vehicle use associated with military operations at Dobbins ARB consists of passenger, delivery trucks, and military vehicles. Passenger vehicles compose most of the vehicles present at Dobbins ARB and the surrounding community roadways. Roadways around the installation include South Cobb Drive to the north, Route 41 (Cobb Parkway) to the east, Atlanta Road to the west, and Windy Hill Road to the south.

4.3. LAND USE

4.3.1. DEFINITION OF THE RESOURCE

The term "land use" refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws. There is, however, no nationally recognized convention or uniform terminology for describing land use categories. As a result, the meanings of various land use descriptions, "labels," and definitions vary among jurisdictions.

Natural conditions of property can be described or categorized as unimproved, undeveloped, and natural or scenic area. There is a wide variety of land use categories resulting from human activity. Descriptive terms often used include residential, commercial, industrial, agricultural, institutional, and recreational.

Two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. Compatibility among land uses fosters the societal interest of obtaining the highest and best uses of real property. Tools supporting land use planning include written master plans/management plans and zoning regulations. According to AFI 32-7062, *Air Force Comprehensive Planning*, the site planning process must address potential noise impacts and consider the location of buildings. In appropriate cases, the locations and extent of proposed actions need to be evaluated for their potential effects on project site and adjacent land uses. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations. Other relevant factors include matters such as existing land use at the project site, the types of land uses on adjacent properties and their proximity to a proposed action, the duration of a proposed activity, and its “permanence.”

4.3.2. AFFECTED ENVIRONMENT

Dobbins ARB is a compact installation bounded by South Cobb Drive to the north, Route 41 (Cobb Parkway) to the east, Atlanta Road to the west, and Windy Hill Road to the south.

On-Installation Land Use. The on-installation land use was obtained from the 2010 Dobbins ARB General Plan (Dobbins ARB 2010a). The General Plan identifies 10 land use categories: administrative, aircraft operations and maintenance, airfield pavements, community commercial, community service, housing, industrial, medical, open space, and outdoor recreation.

Off-Installation Land Use. The off-installation land use was obtained from the 2011 Air Installation Compatible Use Zone (AICUZ) Study for Dobbins ARB (Dobbins ARB 2011b). The 2011 AICUZ Study identifies five land use categories: commercial, industrial, public/semi-public, recreational, and residential.

Future Land Use. According to the 2010 Dobbins ARB General Plan, future land use will continue to support current missions, and provide for potential expansion of missions and activities. Future land use at the installation is defined by functional uses, which allow for development within each land use category, and provide adequate infrastructure to support growth (Dobbins ARB 2010a).

4.4. GEOLOGICAL RESOURCES

4.4.1. DEFINITION OF THE RESOURCE

Topography. Topography refers to the general shape and arrangement of a land surface, including its elevation and the position of both natural and artificial features.

Geology. Geology is the study of Earth’s composition and provides information on the structure of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition.

Soils. Soils are the unconsolidated materials overlaying bedrock or other parent materials. Soils are usually described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

Prime Farmland. Prime farmland is protected under the Farmland Protection Policy Act (FPPA) of 1981. Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The land could be cropland, pasture, rangeland, or other land, but not urban built-up land or water. The intent of the FPPA is to minimize the extent that Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses.

Geologic Hazards. Geologic hazards are defined as a natural geologic event that can endanger human lives and property. Examples include earthquakes, landslides, rock falls, ground subsidence, and avalanches.

4.4.2. AFFECTED ENVIRONMENT

Topography

Dobbins ARB is within the Central Uplands District of the Piedmont Physiographic Province, and the topography of the installation is gently to moderately rolling, with broad ridges dissected by several drainages. Elevations range from 950 feet above mean sea level along the eastern boundary to 1,100 feet above sea level along the western boundary (Dobbins ARB 2007c).

Prime Farmland

Dobbins ARB contains no agricultural land and there are no parcels of prime or unique farmland adjacent to the installation (Dobbins ARB 2004); therefore, the FPPA documents do not apply.

Geologic Hazards

Dobbins ARB is at minimal risk from geologic hazards such as volcanism and earthquakes, since Georgia lies on a passive continental margin with a stable transition between continental and oceanic crust. The U.S Geological Survey (USGS) produced seismic hazard maps based on current information about the frequency and intensity of earthquakes. The maps show the levels of horizontal shaking that have a 2 in 100 chance of being exceeded in a 50-year period. Shaking is expressed as a percentage of the force of gravity (percent g) and is proportional to the hazard faced by a particular type of building. In general, little or no damage is expected at values less than 10 percent g, moderate damage could occur at 10 to 20 percent g, and major damage could occur at values greater than 20 percent g. The 2008 National Seismic Hazard map produced by the USGS shows that Dobbins ARB has a seismic hazard rating of approximately 8 to 10 percent g (USGS 2011b), making the risk of damage from seismic activity minimal.

4.5. WATER RESOURCES

4.5.1. DEFINITION OF THE RESOURCE

Hydrology consists of the redistribution of water through the processes of evapotranspiration, surface runoff, and subsurface flow. Hydrology results primarily from (1) temperature and total precipitation that determine evapotranspiration rates, (2) topography that determines rate and direction of surface flow, and (3) soil and geologic properties that determine rate of subsurface flow and recharge to the groundwater reservoir.

Groundwater consists of subsurface hydrologic resources. It is an essential resource that functions to recharge surface water and is used for drinking, irrigation, and industrial processes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. Surface water resources generally consist of wetlands, lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale.

Waters of the United States are defined within the Clean Water Act (CWA), as amended, and jurisdiction is addressed by the USEPA and the USACE. These agencies assert jurisdiction over (1) traditional navigable waters, (2) wetlands adjacent to navigable waters, (3) nonnavigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-around or have continuous flow at least seasonally, and (4) wetlands that directly abut such tributaries. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredge or fill into waters of the United States including wetlands. Encroachment into waters of the United States and wetlands requires a permit from the state and the Federal government. An encroachment into wetlands or other “waters of the United States” resulting in displacement or movement of soil or fill materials has the potential to be viewed as a violation of the CWA if an appropriate permit has not been issued by the USACE. In Georgia, the USACE has primary jurisdictional authority to regulate wetlands and waters of the United States.

A water body can be deemed impaired if water quality analyses conclude that exceedances of water quality standards, established by the CWA, occur. The CWA requires that states establish a Section 303(d) list to identify impaired waters and establish Total Maximum Daily Loads (TMDLs) for the sources causing the impairment. A TMDL is the maximum amount of a substance that can be assimilated by a water body without causing impairment.

The USEPA published the technology-based Final Effluent Limitations Guidelines (ELGs) and New Performance Standards for the Construction and Development Point Source Category on 1 December 2009 to control the discharge of pollutants from construction sites. The Rule became effective on 1 February 2010. After this date, all USEPA- or state-issued construction general permits were to be revised to incorporate the ELG requirements. The USEPA currently regulates large and small construction activity through the 2008 Construction General Permit (CGP), which will expire on 15 February 2012. A proposed new CGP would be finalized prior to the expiration of the 2008 CGP; therefore, all new construction sites would need to meet the requirements outlined in the proposed new

CGP, including technology-based and water-quality-based effluent limits that apply to all discharges, unless otherwise specified in the CGP. Permittees must select, install, and maintain effective erosion- and sedimentation-control measures as identified and as necessary to comply with the proposed new CGP, including the following:

- Sediment controls, such as sediment basins, sediment traps, silt fences, and vegetative buffer strips
- Offsite sediment tracking and dust control
- Runoff management
- Erosive velocity control
- Post-construction stormwater management
- Construction and waste materials management
- Non-construction waste management
- Erosion control and stabilization
- Spill/release prevention

Construction activities, such as clearing, grading, trenching, and excavating, result in the disturbance of soils and sediment. If not managed properly, disturbed soils and sediments can easily be washed into nearby water bodies during storm events, where water quality is reduced. Section 438 of the Energy Independence and Security Act (EISA) (42 U.S.C. 17094) establishes into law new stormwater design requirements for Federal construction projects that disturb a footprint of greater than 5,000 ft² of land. EISA Section 438 requirements are independent of stormwater requirements under the CWA. The project footprint consists of all horizontal hard surface and disturbed areas associated with project development. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology shall be modeled or calculated using recognized tools and must include site-specific factors such as soil type, ground cover, and ground slope. Site design shall incorporate stormwater retention and reuse technologies such as bioretention areas, permeable pavements, cisterns/recycling, and green roofs to the maximum extent technically feasible. Post-construction analyses would be conducted to evaluate the effectiveness of the as-built stormwater reduction features (DOD 2010a). These regulations have been incorporated into applicable DOD Unified Facilities Criteria (UFC) in April 2010, which stated that low-impact development (LID) features would need to be incorporated into new construction activities to comply with the restrictions on stormwater management promulgated by EISA Section 438. LID is a stormwater management strategy designed to maintain site hydrology and mitigate the adverse impacts of stormwater runoff and nonpoint source pollution. LIDs can manage the increase in runoff between pre- and post-development conditions on the project site through interception, infiltration, storage, or evapotranspiration processes before the runoff is conveyed to receiving waters. Examples of the methods include bioretention, permeable pavements, cisterns/recycling, and green roofs (DOD 2010b). Additional guidance is provided in the USEPA's Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act (USEPA 2009).

In addition, wetlands are protected under EO 11990, *Protection of Wetlands*, the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This order directs Federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands. In

furtherance of NEPA, agencies shall avoid undertaking or assisting in new construction in wetlands unless there is no practical alternative. Each agency will provide opportunity for early public review of plans and proposals for construction in wetlands, including those whose impact is not significant to require EIS preparation. The Deputy Assistant Secretary of the Air Force - Environment, Safety, and Occupational Health or another designated official must sign a Finding of No Practicable Alternative (FONPA) before any action within a Federal wetland may proceed as specified in Secretary of the Air Force Order 780.1. The recently revised AFI 32-7064 grants approval authority to the chairperson of the Headquarters AFRC Environmental Protection Committee for wetlands encroachment FONPAs. In preparing a FONPA, the installation must consider the full range of practicable alternatives that will meet justified program requirements, are within the legal authority of the U.S. Army Corps of Engineers (USACE), meet technology standards, are cost-effective, do not result in unreasonable adverse environmental impacts, and other pertinent factors. Once the practicality of alternatives has been fully assessed, only then should a statement regarding the FONPA be made into the associated FONSI or record of decision.

As a result of the above-mentioned state and Federal regulations, it is the responsibility of the USAF to identify jurisdictional waters of the United States (including wetlands) occurring on USAF installations that have the potential to be impacted by installation activities. Such impacts include construction of roads, buildings, runways, taxiways, navigation aids, and other appurtenant structures; or activities as simple as culvert crossings of small intermittent streams, rip-rap placement in stream channels to curb accelerated erosion, and incidental fill and grading of wet depressions.

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters. The living and nonliving parts of natural floodplains interact with each other to create dynamic systems in which each component helps to maintain the characteristics of the environment that supports it. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and a diversity of plants and animals. Floodplains provide a broad area to inundate and temporarily store floodwaters. This reduces flood peaks and velocities and the potential for erosion. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body (FEMA 1986).

Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated by the Federal Emergency Management Agency (FEMA), which defines the 100-year floodplain. The 100-year floodplain is the area that has a 1 percent chance of inundation by a flood event in a given year. Certain facilities inherently pose too great a risk to be in either the 100- or 500-year floodplain, such as hospitals, schools, or storage buildings for irreplaceable records. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

EO 11988, *Floodplain Management*, requires Federal agencies to determine whether a proposed action would occur within a floodplain. This determination typically involves consultation of FEMA Flood Insurance Rate Maps (FIRMs), which contain enough general information to determine the relationship of the project area to nearby floodplains. EO 11988 directs Federal agencies to avoid floodplains unless the agency determines that there is no practicable alternative.

4.5.2. AFFECTED ENVIRONMENT

Groundwater. Groundwater under Dobbins ARB consists of a surficial water table and bedrock aquifers; however, the bedrock aquifers beneath the installation are generally not productive and contain a high concentration of minerals (Dobbins ARB 2010a). The aquifer beneath the sites is unconfined, characterized by three geologic strata (residual soils, underlying fractured bedrock, and the competent bedrock). The residual soils and underlying fractured bedrock provide the dominant pathway for groundwater flow. Average hydraulic conductivities in the vicinity are between 0.00005 to 0.002 feet per minute (USAF 2010). Groundwater in the northern Piedmont Physiographic Province occurs predominantly in joints and fractures in the bedrock and in the pore spaces of the overlying residual soils. Recharge is principally from rainfall that either seeps downward through the residuum or flows into openings in exposed rock (USAF 2010).

Surface water. Dobbins ARB is within the Rottenwood Creek and Poorhouse Creek watersheds, which drain into the Chattahoochee River approximately 3.5 miles southeast of the installation. There are 2 man-made lakes on the installation (Big Lake and Little Lake), 28 delineated streams and tributary stream reaches, 5 spill retention ponds, 3 sedimentation detention basins, and 4 stormwater retention basins. The spill retention ponds act as containment basins for potential petroleum, oil, and lubricants (POL) spills that could occur near the flight line, while the sedimentation basins are used for stormwater and sediment retention. The installation is drained throughout by a series of storm sewers and ditches. Stormwater exits through outfalls surrounding the installation boundary. The southern outfalls of the installation drain into Poorhouse Creek and the northern outfalls drain into Rottenwood Creek (Dobbins ARB 2007c).

Wetlands/Floodplains. Dobbins ARB has 21 wetland areas totaling approximately 23 acres as determined in a 2009 wetland delineation. The wetlands are predominantly found along Rottenwood Creek, Poorhouse Creek, and surrounding Big Lake and Little Lake (Dobbins ARB 2009a).

Wetland W-111b is located on the southwest portion of Big Lake. Big Lake is the larger of the two lakes on Dobbins ARB. The lake has a surface area of about 10 acres, including associated wetlands, and is in the central section of the Base, north of the runway. Big lake is impounded by a dam along the southern half of its eastern boundary. The open water component of Big Lake is 6.71-acres and is characterized as a small lake with mowed maintained banks around its eastern boundary and palustrine forested habitat with a narrow palustrine emergent and palustrine scrub shrub fringe around its southern, western and northern boundaries.

Wetland W-111b is 1.80-acres and is characterized primarily by palustrine forested habitat with a dense understory. Vegetation in the wetland is characterized by red maple and sweet gum in the tree layer; privet, smooth alder, elderberry, and blackberry in the shrub layer; greenbriar, sawbriar, and Japanese honeysuckle in the vine layer; and soft rush, woolgrass, and broad leaved cattail in emergent components of the herbaceous layer. Soil in the wetland is characterized by a saturated, low chroma silty clay loam.

Hydrology appears to be from overland flow, shallow groundwater, and impoundment of Big Lake. Shallow groundwater is indicated by the occurrence of free water at the surface in soil borings placed outside of inundated areas of the wetland.

The Proposed Action will impact jurisdictional Wetland W-111b. As part of the repairs to the system, a culvert extension directly northwest of the airfield is required. The culvert extension will allow Dobbins ARB to keep the drainage structure out of the flight hazard area. Due to the age and poor condition of existing headwall at this location, it will be demolished and replaced with a larger 84-inch by 84-inch box culvert. The culvert will be extended approximately 250 feet from the existing headwall in order to conform to airfield clear zone requirements. Approximately 12,997 square feet/0.30-acre of jurisdictional Wetland W-111b will be impacted as part of the culvert extension.

4.6. BIOLOGICAL RESOURCES

4.6.1. DEFINITION OF THE RESOURCE

Biological resources include native or naturalized plants and animals and the habitats (e.g., grasslands, forests, and wetlands) in which they exist. Protected and sensitive biological resources include Endangered Species Act (ESA) - listed species (threatened or endangered) and those proposed for ESA listing as designated by the U.S. Fish and Wildlife Service (USFWS); state-listed threatened, endangered, or special concern species; migratory birds; and bald and golden eagles. Sensitive habitats include those areas designated by the USFWS as critical habitat protected by the ESA and as sensitive ecological areas designated by state or other Federal rulings. Sensitive habitats also include wetlands, plant communities that are unusual or limited in distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, crucial summer and winter habitats).

The ESA (16 U.S.C. §1531 et seq.) establishes a Federal program to protect and recover imperiled species and the ecosystems upon which they depend. The ESA requires Federal agencies, in consultation with the USFWS, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. Under the ESA, “jeopardy” occurs when an action is reasonably expected, directly or indirectly, to diminish numbers, reproduction, or distribution of a species so that the likelihood of survival and recovery in the wild is appreciably reduced. An “endangered species” is defined by the ESA as any species in danger of extinction throughout all or a significant portion of its range. A “threatened species” is defined by the ESA as any species likely to become an endangered species in the foreseeable future. Candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as threatened or endangered under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. The ESA also prohibits any action that causes a “take” of any listed species. “Take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.”

State-protected species in Georgia are protected under the Georgia Wildflower Preservation Act of 1973 and the Georgia Endangered Wildlife Act of 1973. The Rules and Regulations of the Georgia Department of Natural Resources (DNR), Wildlife Resources Division for the Protection of Endangered, Threatened, Rare, or Unusual Species (Chapter 391-4-10) establish the procedures to be followed in the protection of endangered species of plant and animal life, as authorized by these acts.

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703–712), as amended, and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require Federal agencies to minimize or avoid impacts on migratory birds. Unless otherwise permitted by regulations, the Migratory Bird Treaty Act makes it unlawful to (or attempt to) pursue, hunt, take, capture, or kill any migratory bird, nest, or egg. If design and implementation of a Federal action cannot avoid measurable negative impacts on migratory birds, EO 13186 directs the responsible agency to develop and implement, within 2 years, a Memorandum of Understanding with the USFWS that shall promote the conservation of migratory bird populations.

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668–668c), as amended, which prohibits the “take” of bald or golden eagles in the United States. The Act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.” For purposes of these guidelines, “disturb” means “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause: (1) injury to an eagle; (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” based on the best scientific information available. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle’s return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

4.6.2. AFFECTED ENVIRONMENT

Vegetation. The majority of land on Dobbins ARB is either improved or semi-improved and is dominated by domestic grasses such as Bahia grass (*Paspalum notatum*) and Bermuda grass (*Cynodon dactylon*) (Dobbins ARB 2010a). Forested vegetation accounts for the vast majority of unimproved land and is primarily pine/ hardwood forests. These forests are dominated by loblolly pine (*Pinus taeda*) though lesser amounts of short-leaf pine (*P. echinata*) and Virginia pine (*P. virginiana*) also occur (Dobbins ARB 2007a).

The most widespread and invasive plant species found on Dobbins ARB are privet (*Ligustrum sinensis* and *L. japonicum*), Japanese honeysuckle (*Lonicera japonica*), Chinese wisteria (*Wisteria sinensis*), mimosa (*Albizia julibrissin*), and Japanese stiltgrass (*Microstegium vimineum*). Autumn olive (*Elaeagnus umbellata*), English ivy (*Hedera helix*), princess tree (*Paulownia tomentosa*), sericea lespedeza (*Lespedeza cuneata*), multiflora rose (*Rosa multiflora*), and tree of heaven (*Ailanthus altissima*) are other less abundant, nonnative species that have been documented at Dobbins ARB (Dobbins ARB 2007a). Before the implementation of an installation-wide eradication program, kudzu (*Pueraria lobata*) was considered the primary nuisance species on the installation. Control efforts have been extremely successful and little kudzu was observed on the installation during 2004 field surveys. Continued monitoring and treatment will be required for the long-term control of this species, particularly along the shared Dobbins ARB/AFP-6 border and Route 280, where its presence is still extensive (Dobbins ARB 2007a).

Wildlife. The most abundant native birds in the vicinity of Dobbins ARB include the wild turkey (*Meleagris gallopavo*), northern bobwhite (*Colinus virginianus*), mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), tufted titmouse (*Baeolophus bicolor*), and eastern towhee (*Pipilo erythrophthalmus*). Canada geese (*Branta canadensis*), common grackles (*Quiscalus quiscula*), red-winged blackbirds (*Agelaius phoeniceus*), and rusty blackbirds (*Euphagus carolinus*) are also common native species. European starlings (*Sturnus vulgaris*) and house sparrows (*Passer domesticus*) are common nonnative bird species at Dobbins ARB (Dobbins ARB 2007a). Mammalian species that dominate the ecoregion include the white-tailed deer (*Odocoileus virginianus*), red fox (*Vulpes vulpes*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*), and opossum (*Didelphia virginiana*) (Dobbins ARB 2007a). The eastern boxturtle (*Terrapene carolina*), common garter snake (*Thamnophis sirtalis*), northern watersnake (*Nerodia sipedon*), and eastern kingsnake (*Lampropeltis getula*) are characteristic reptilian species. Commonly observed amphibians include spring peeper (*Pseudacris crucifer*) and chorus frog (*Pseudacris triseriata*) (Dobbins ARB 2007a).

Protected and Sensitive Species. No federally listed threatened, endangered, or candidate species are known to occur on Dobbins ARB. Six populations of pink ladyslipper (*Cypripedium acaule*), which is listed as unusual by the Georgia DNR and protected under the State of Georgia Wildflower Protection Act of 1973, have been documented on Dobbins ARB. An “unusual species” is defined by Georgia DNR as any resident species that exhibits special or unique features and because of these features deserves special consideration in its continued survival in the State (Georgia DNR Rules, 391-4-10.02). These pink ladyslipper populations range in size from less than 10 to more than 2,000 individuals on the installation and occur in open portions of the mature pine/pine hardwood stands on Dobbins ARB. A colony of pink ladyslippers was documented in the understory of the south-central portion of forest stand DN-6, just east of Ridenour Road (Dobbins ARB 2011a).

The U.S. Forest Service, in cooperation with Georgia DNR, recommends protecting populations of the pink ladyslipper that have more than 100 plants within a 50-foot radius. Five such populations of pink ladyslipper have previously been documented on Dobbins ARB (Dobbins ARB 2007a). According to the Forest Management Plan for Dobbins ARB, stands that have unique sites such as inclusions of pink ladyslipper colonies shall be carefully managed to promote the uniqueness of the area or protected where healthy stand conditions persist (Dobbins ARB 2011a). The Forest Management Plan states that all management activities planned in these stands should be executed in such a manner as not to impact pink ladyslippers negatively (Dobbins ARB 2011a).

The majority of birds on Dobbins ARB and the vicinity are migratory species as defined in 50 CFR 10.13 and are therefore protected under the Migratory Bird Treaty Act and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*.

The bald eagle is not known to nest near Dobbins ARB but is transient through the area (Dobbins ARB 2007a). No large bodies of water suitable as bald eagle habitat occur within the vicinity of Dobbins ARB.

4.7. CULTURAL RESOURCES

4.7.1. DEFINITION OF THE RESOURCE

Cultural resources is a term of art or an “umbrella term” for many heritage-related resources, including prehistoric and historic sites, buildings, structures, districts, objects, or any other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason.

Several Federal laws and regulations govern protection of cultural resources, including the National Historic Preservation Act (NHPA) (1966), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act (1990). Cultural resources are commonly subdivided into archaeological resources (prehistoric or historic sites where human activity has left physical evidence of that activity but no structures remain standing), architectural resources (buildings or other structures or groups of structures that are of historic architectural, or other significance), and traditional cultural resources (for example, traditional gathering areas).

The NHPA defines historic properties as properties eligible for or listed in the National Register of Historic Places (NRHP). The NRHP is the official listing of properties significant in U.S. history, architecture, or prehistory, and includes both publicly and privately owned properties. The NRHP list is administered by the National Park Service. Historic properties might be buildings, structures, prehistoric or historic archaeological sites, districts, or objects that are generally 50 years of age or older, are historically significant, and that retain integrity that conveys this significance. More recent resources, such as Cold War-era buildings, might warrant listing if they have the potential to gain significance in the future or if they meet “exceptional” significance criteria.

Section 106 of the NHPA requires agencies to take into account the effect of their undertakings on properties listed in or eligible for listing in the NRHP and to afford the ACHP a reasonable opportunity to comment on the undertaking.

4.7.2. AFFECTED ENVIRONMENT

Dobbins ARB occupies a 1,664-acre site between the cities of Marietta and Smyrna in Cobb County, Georgia. A portion of the installation consists of a runway that is shared with Lockheed Martin, which operates AFP-6. The site of Dobbins ARB and AFP-6 has been occupied since prehistoric eras, and was the site of several farms and communities as early as 1832 and until the establishment of the installation in the 1940s (Dobbins ARB 2007c).

Compliance with the NHPA, in consultation with the Georgia State Historic Preservation Office (GA SHPO) has resulted in the identification of a number of historic resources at Dobbins ARB and its associated facilities. Of the resources that predate the installation, the Bankston Rock House is listed in the NRHP and the Big Lake Dam, has been determined eligible for listing in the NRHP (Dobbins ARB

2007c). The Sibley-Gardner is an antebellum structure that has been determined not eligible for listing in the NRHP due to the loss of context created by the construction of AFP-6. Likewise, the Little Lake Dam has been determined ineligible (USAF 2005). The Mount Sinai Cemetery, dating to the 1890s, has not been evaluated for NRHP eligibility, but is treated as a sacred space (Dobbins ARB 2007c).

Several archaeological investigations have occurred on Dobbins ARB. These include reconnaissance surveys of both specific suspected archaeological sites and of construction sites for compliance with cultural resource laws. No surveys have identified any NRHP-eligible archaeological sites. Despite the presence of other important Civil War-related sites in the Dobbins ARB vicinity, it is suspected that none exist on the installation due to the land disturbance over time by farming and construction (Dobbins ARB 2007c). No investigations have been undertaken but there is demonstrated concern that there might be archaeological resources related to the Sibley-Gardner house and possible occupation of the home site as a field hospital during the Civil War. Additionally, oral history relates the presence of an early spring near the house, which indicates prehistoric occupation. A sensitivity zone was defined in the Integrated Cultural Resources Management Plan, Air Force Plant 6, 2006-2010 which is outside of the boundaries of the Corps Lab Site (USAF 2005).

Buildings older than 50 years of age on Dobbins ARB have been surveyed though not all have been evaluated for NRHP eligibility. Most of these buildings are located on the eastern end of the installation and would not be affected by the Proposed Action.

4.8. INFRASTRUCTURE

4.8.1. DEFINITION OF THE RESOURCE

Infrastructure can be defined as the basic physical systems (e.g., utilities, water, and sewage) that enable a community to function. The infrastructure information provided herein was obtained from the 2010 Dobbins ARB General Plan (Dobbins ARB 2010a) and the 2011 Environmental Baseline Surveys for the Corps Lab Site (Dobbins ARB 2011g), Barclay Site (Dobbins ARB 2011f), and the City of Marietta Site (Dobbins ARB 2011d). This section provides a brief summary of the infrastructure components that currently exist at the Dobbins ARB and the four site alternatives. The infrastructure components to be discussed in this EA include utilities (electrical, natural gas, liquid fuel, central heating and cooling, water supply, sanitary sewage/wastewater, stormwater, and communications systems), solid waste management, and transportation (existing roadways).

EO 13514, *Federal Leadership In Environmental, Energy, And Economic Performance*, dated October 5, 2009, directs Federal agencies to improve water use efficiency and management; implement high performance sustainable Federal building design, construction, operation, and management; and advance regional and local integrated planning by identifying and analyzing impacts from energy usage and alternative energy sources. EO 13514 also directs Federal agencies to prepare and implement a Strategic Sustainability Performance Plan to manage its greenhouse gas emissions, water use, pollution prevention, regional development and transportation planning, and sustainable building design; and promote

sustainability in its acquisition of goods and services. Section 2(g) requires new construction, major renovation, or repair and alteration of buildings to comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings. The CEQ regulations at 40 CFR 1502.16(e) directs agencies to consider the energy requirements and conservation potential of various alternatives and mitigation measures.

4.8.2. AFFECTED ENVIRONMENT

Electrical System. The Georgia Power Company provides electrical power to Dobbins ARB. The power is supplied through the Lockheed Martin substation on the north side of AFP-6. Lockheed Martin solely owns the equipment from the reclosers and switching gear through the distribution equipment. Within the boundaries of the installation, Lockheed Martin acts as the purveyor of electricity to the Air Force Reserve and the Georgia Guard Bureau (Dobbins ARB 2010a).

Two primary electrical feeders enter AFP-6 at South Cobb Drive and feed the substation. A backup power supply is also provided, which enters AFP-6 from the northwest along Atlanta Road. The substation is designed to serve only the installation. No off-installation facilities are supplied electricity by this substation.

Two main feeder lines and an alternate feeder line enter the installation from Industrial Drive and serve facilities on Dobbins ARB through an overhead and underground distribution system. A network of underground and overhead electrical distribution lines traverses the east end of the runway and supplies the U.S. Army Reserve Training Center.

The electrical system was privatized with the Georgia Power Company in April 2004. The entire overhead system was upgraded under the privatization. The feeder line from Lockheed Martin that enters the installation from AFP-6 was also upgraded with replacement of the regulators. In addition to the electricity provided by the Georgia Power Company, the installation also maintains a series of diesel fuel powered emergency generators at various buildings where power outages would seriously undermine the ability of the installation to complete its mission (Dobbins ARB 2010a).

According to the Georgia Power Company, peak electrical demand occurs in the summer months when total daily demand surpasses 37 megawatt-hours. Based on the current capacity of the substation, 38 percent of the substation's capacity is in surplus during the peak periods (Dobbins ARB 2010a).

Natural Gas and Propane. Natural gas is supplied to Dobbins ARB by Atlanta Gas Light Company. The natural gas main enters the installation via a 6-inch steel pipe near the main gate and distributes the natural gas through a limited-access, looped system. The natural gas distribution system consists of a network of underground gas mains ranging from 3 to 8 inches in diameter.

The Atlanta Gas Light Company can meet virtually any requirement for natural gas. However, during periods of particularly cold weather, the demand for natural gas is extremely high, which forces the Atlanta Gas Light Company to curtail supplies of natural gas to its industrial customers, including those facilities at Dobbins ARB that are provided interruptible service (Dobbins ARB 2010a).

Liquid Fuel. The liquid fuels used at Dobbins ARB include jet propulsion number 8 (JP-8) aviation gasoline, unleaded gasoline, and diesel fuel. The fuels are stored in aboveground storage tanks (ASTs) and underground storage tanks (USTs), tank trucks, and bowsters. Tank trucks and bowsters are only used for temporary storage and transportation of fuels on a limited basis. Dobbins ARB storage tanks hold approximately 400,000 gallons of fuel. A Spill Prevention, Control, and Countermeasure (SPCC) Plan is in place and implemented to prevent and clean up spills from oil storage tanks.

Diesel fuel, which is used for both military vehicles and as a backup fuel source for emergency generators, is stored in a variety of ASTs dispersed throughout the installation that range in size from 300 to 10,000 gallons (Dobbins ARB 2010a). In addition, unleaded fuel is stored in one 10,000-gallon UST. Nearly 300,000 gallons of JP-8 are stored in two aboveground, vertical, fixed-roof tanks at the POL bulk fuels storage complex. No USTs at the installation are used to store JP-8.

Additionally, the installation has refueler trucks located at the refueler parking area that are used to transport JP-8 from the storage tanks to the flightline for aircraft refueling.

Liquid oxygen is stored in two ASTs at Building 990, near the main gate of the installation. The total capacity of these tanks is 1,000 gallons. No other supplies of liquid oxygen or nitrogen are kept on installation (Dobbins ARB 2010a).

Central Heating and Cooling. No central heating or cooling plant exists at Dobbins ARB. The majority of the buildings on the installation are heated by natural gas and some electric. A central (steam) heating plant formerly serviced the majority of Dobbins ARB but was demolished more than a decade ago (Dobbins ARB 1999).

Water Supply System. The Cobb County-Marietta Water Authority (CCMWA) provides potable drinking water to the Dobbins ARB through a contract agreement with Lockheed Martin. According to the Dobbins ARB General Plan dated June 2010, the CCMWA has two surface water treatment facilities: (1) the Quarles Treatment Plant located on Lower Roswell Road at the Chattahoochee River, and (2) the Wyckoff Treatment Plant located on Mars Hill Road in the northwest corner of Cobb County. The Quarles plant draws its water from the Chattahoochee River and the Wyckoff plant draws its water from Lake Allatoona. Collectively, these two plants can provide a maximum of 136 million gallons per day (MGD) of water to residential, commercial, and industrial customers in Cobb County. CCMWA also has nine water storage tanks dispersed throughout the county with a total capacity of 37 million gallons.

Potable drinking water is supplied to the Dobbins ARB through a 20-inch steel water main near the main entrance to a looped supply system. The water distribution system was originally constructed between 1954 and 1956 and consists mostly of cast-iron pipes ranging in size from 2 to 16 inches in diameter. Potable water is provided to the installation at an average of 110 to 120 pounds per square inch (psi), but pressures can be as high as 150 psi.

Upgrades to the potable water system at the installation have included the replacement of system components that have degraded, including (1) the replacement of the old cast-iron pipes with polyvinyl chloride (PVC) piping at various locations; (2) replacing several distribution mains, valves, branch lines, and fittings; and (3) the extension of dead-end branch lines to form a looped supply system. Other

projects have replaced worn system components and water valves on the 18-inch water mains, and extended water service into areas north of South Cobb Drive that are proposed for new construction.

Existing and projected demands for potable water at the installation will continue to be satisfied by the county's potable water system (Dobbins ARB 2010a). The water distribution system is adequate to support all existing and future requirements. The CCMWA will continue to provide high-quality water to the installation through the lease with Lockheed Martin and meet the installation's water requirements for consumption and fire-fighting purposes.

Sanitary/Sewer Wastewater System. Wastewater generated at Dobbins ARB is treated at the tertiary sewage treatment plant located on the southwest side of the installation and to the west of the Georgia Guard Bureau. The wastewater treatment plant is operated by AFP-6 and has a maximum treatment capacity of 7 MGD of wastewater and a historic average daily flow of 1.1 MGD.

The installation's wastewater collector system is Government-owned and -operated, and consists mostly of vitrified clay pipes ranging in size from 6 to 10 inches in diameter, with some newer collection lines constructed of reinforced concrete pipe. Sewage is transported to the treatment plant via a network of six lift stations aligned along the collection system adjacent to the north side of the runway. The few recent upgrades to the system have been those associated with the construction of new buildings; in which case PVC piping was used in place of vitrified clay or reinforced concrete piping (Dobbins ARB 2010a).

The treated wastewater is discharged to Nickajack Creek, approximately 8 miles southwest of the installation. Nickajack Creek is a tributary to the Chattahoochee River. Wastewater from U.S. Army Reserve facilities discharge directly into a collector line of the Cobb County sanitary sewer system that passes through the eastern edge of the installation.

No industrial wastewater treatment plant is located on Dobbins ARB. The only available industrial wastewater pre-treatment occurring on the installation is through oil/water separators that are located at various maintenance shops and in areas where petroleum-based products are used (Dobbins ARB 2010a). The runoff from these separators is discharged to the sanitary sewer system or to the stormwater drainage system.

Industrial wastewater is pre-treated at a wastewater treatment plant operated by Lockheed Martin and is located at AFP-6. The Lockheed Martin industrial wastewater treatment plant system services only the GAARNG hangar (Building 555) and the former remediation system at the Bulk Fuels Storage facility. These lines discharge to the Lockheed Martin Industrial Treatment Plant, which in turn discharges to the Tertiary Treatment Plant. All other waste lines on Dobbins ARB discharge directly to the Tertiary Treatment Plant through the sanitary sewer system. Lockheed Martin/AFP-6 operates the wastewater treatment plant under Georgia National Pollutant Discharge Elimination System (NPDES) Permit No. 0001198 (Dobbins ARB 2010a).

Stormwater Sewer System. The watersheds associated with the Dobbins ARB surface drainage system include Rottenwood Creek watershed in the northern portion of the installation and the Poorhouse Creek watershed in the southern portion of the installation (Dobbins ARB 2010a).

The stormwater drainage system at the Dobbins ARB consists of culverts, man-made ditches, and natural drainageways, which transport the collected water to one of nine outfalls. Eight of the nine outfalls

(outfalls 001 through 008) discharge to a separate municipal storm sewer system or a natural drainage way. Outfalls 001, 003, 004, and 005 are located on the north side of the installation and eventually discharge into Rottenwood Creek. Outfall 002 discharges into the municipal storm sewer and is located on the east side of the installation near the main entrance. Outfalls 006, 007, and 008 are on the south side of the installation and eventually discharge into Poorhouse Creek. Outfall 009 discharges directly to Poorhouse Creek itself. The piping network for the installation is constructed of metal, vitrified clay, concrete, or reinforced concrete (Dobbins ARB 2010a).

Stormwater discharges from areas where industrial activities are conducted are currently authorized by the facility's NPDES Permit dated July 2011. As required by the NPDES Permit, Dobbins ARB drafted and implements a Stormwater Pollution Prevention Plan (SWPPP), which includes an assessment of the installation's potential to release contaminants into the drainage system and a series of procedures required to minimize contaminants entering stormwater. In addition, all on-installation construction complies with state and local regulations concerning stormwater detention for development.

Communications System. The communications system at Dobbins ARB includes the current installation level Command, Control, Communications, Computer, and Information (C4I) system infrastructure (Dobbins ARB 2010a). The C4I is a blueprint to provide an installation-wide network. Currently, communications at Dobbins ARB are provided by a series of copper and fiber optic cable networks.

The existing copper cable plant is owned by the Government and managed/maintained by an operations and maintenance contractor. It is a mix of underground cables installed in conduit and direct buried cables. Multimode cable is installed to most buildings within the AFRC community. The fiber backbone allows network services to be extended to most major C4I users, allowing ample growth into high-speed, bandwidth-intensive applications. This infrastructure improves bandwidth and provides higher reliability of the transport network. All buildings on Dobbins ARB are connected through fiber optic cables. However, some buildings currently require additional fiber optic strands to support their missions due to high usage.

Existing cable facilities between the Dobbins ARB and Lockheed Martin are more than 30 years old. Several cuts of the air core copper cable have made the direct connection between the USAF facilities and the Lockheed Martin facilities difficult. The interconnecting cable is owned by AT&T, but was recently abandoned. AT&T now uses other cable to interconnect these two sites (Dobbins ARB 2010a).

Voice communications at Dobbins ARB are controlled by the installation Dial Central Office (DCO), which provides point-to-point connectivity between users on-installation and the long-haul networks. The communications system uses a MSL-100 telephone switch to provide administrative telephone and operator service to Dobbins ARB, hot lines, conferencing capability, and advanced digital features, such as Integrated Service Digital Network (ISDN). The telephone switch is an MSL-100 that has the capability of providing up to 10,000 telephone lines. Only 4,800 telephone lines are currently in service (Dobbins ARB 2010a).

Dobbins ARB provides navigation aids through the use of the AN/FRN-45 Tactical Air Navigation system, which is augmented by a dual-channel AN/GPN-20 Airport Surveillance Radar with a tower mounted antenna and the Mark 20A Instrument Landing Systems and an AN/FPN-62 Precision Approach Radar. The tactical air navigation system generates a radio beacon that pilots use to accurately determine

heading and distance from the installation during terminal and en-route phases of flight. The 20A Instrument Landing Systems and the AN/FPN-62 Precision Approach Radar systems emit signals that are used as horizontal and vertical guidance information for aircraft on final approach. Dobbins ARB also employs the Meteorological/Navigational cable system that interconnects the indicators and systems that provide weather and navigational information in support of installation operations.

Solid Waste Management. There are currently no active landfills located at Dobbins ARB. Municipal solid waste generated at the installation is discarded into waste receptacles and dumpsters located throughout the facility. Solid waste generated at the installation is collected and transported to state-permitted municipal landfills by a private hauler. Solid waste collection disposal in Cobb County involves both the public and private sector (Dobbins ARB 1999). Private commercial haulers and county municipalities collect solid waste and offer curbside recycling throughout the county. The remaining solid waste that is generated in the county is temporarily stored in private transfer stations and subsequently transported to county landfills for disposal.

Dobbins ARB manages a comprehensive recycling program to reduce the amount of solid waste generated. Recyclable items are collected in separate receptacles than solid waste and transported to the installation's Recycling Center for processing. Recyclable items include paper, aluminum cans, cardboard, wood, fiberboard, scrap metal, tires, and polystyrene. Construction and demolition wastes are separated from the solid waste stream and recycled at the installation (Dobbins ARB 2011g).

The installation operated an on-installation landfill from the 1940s until 1974. This landfill is now considered an IRP site and is located within the boundaries of Site Alternative 1. This IRP site, known at Landfill 01 (or LF-01) had soil and groundwater contamination from the landfilling of waste, but is currently closed with No Further Action required (Dobbins ARB 2011g).

Transportation. Roads within Dobbins ARB that would be used to access the sites include Atlantic Avenue, Industrial Drive, and Gym Road. Atlanta Avenue and Gym Road are primary transportation routes on the installation. Access to most of the facilities on Dobbins ARB is provided by secondary roads that connect to Atlanta Avenue. Industrial Drive is a tertiary road; these roads have the lowest traffic volumes and speeds (Dobbins ARB 2010a).

Access to Dobbins ARB from the surrounding region is provided by several major roadways. Interstate I-75 is approximately 1 mile east of the installation and connects to Cobb Parkway Southeast (US 41) and downtown Atlanta. I-285 runs east-west and is adjoined to I-75. I-285 is connected to I-85 on the east and I-20 on the west. Atlanta Road connects to South Cobb Drive and Windy Hill Road, both of which have access to I-75. The main gate on the installation is on South Cobb Drive and Cobb Parkway Southeast.

In 2008, the Cobb County 2030 Comprehensive Transportation Plan assessed existing transportation conditions and projected future needs in the region (Cobb County 2008). Several methods were used to evaluate the roadway system. One of the methods assesses the roadway capacity during peak traffic hours. According to the Plan, the assessment indicated that traffic can move freely during peak hours on South Cobb Drive, portions of Delk Road, and Atlanta Road (southwest of the installation) under the existing conditions (Cobb County 2008). In this Plan, 2005 baseline traffic data were used for existing conditions.

4.9. HAZARDOUS MATERIALS AND WASTES

4.9.1. DEFINITION OF THE RESOURCE

Hazardous substances include both hazardous materials and hazardous waste. A hazardous substance, pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. §9601(14)), is defined as “(A) any substance designated pursuant to Section 1321(b)(2)(A) of Title 33; (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. §6921); (D) any toxic pollutant listed under Section 1317(a) of Title 33; (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. §7412); and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator of USEPA has taken action pursuant to Section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).”

Hazardous materials are defined by 49 CFR 171.8 as “hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions” in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105–180.

RCRA defines a hazardous waste in 42 U.S.C. §6903, as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

The Toxic Substances Control Act (TSCA) of 1976 provides USEPA with authority to require reporting, record-keeping and testing requirements, and issue restrictions relating to chemical substances or mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals including PCBs, asbestos, radon, and LBP. Special hazards are those substances that might pose a risk to human health but are not regulated as contaminants under the hazardous wastes statutes.

4.9.2. AFFECTED ENVIRONMENT

Several hazardous waste-type management plans exist and are implemented at Dobbins ARB. These plans and instructions include the following:

- The Hazardous Waste Management Plan
- SWPPP for Municipal and Industrial Activities
- Integrated Pest Management Plan
- AFI 40-201, *Managing Radioactive Materials in the U.S. Air Force* which implements AFRD 40-2, *Radioactive Material-Non-Nuclear Weapons*
- Air Force Technical Order 00.110N22, Radioactive Waste Disposal
- AFI 32-7042, *Waste Management*
- AFI 32-1052, *Facilities Asbestos Management*
- Dobbins ARB Asbestos Operations and Management Plan
- Dobbins ARB Lead Based Paint Management Plan.

Hazardous Materials and Petroleum Products

AFI 32-7086, *Hazardous Materials Management*, creates procedures and standards that govern the management of hazardous materials throughout the USAF and establishes roles, responsibilities, and requirements for a hazardous materials management program. Two plans, USAF Management Action Plan and the Hazardous Materials Emergency Planning and Response Plan for Dobbins ARB are currently established to describe the procedures and instruction in managing hazardous waste spills.

Hazardous and Petroleum Wastes

A Hazardous Waste Management Plan is implemented at Dobbins ARB for the proper management of hazardous and other regulated wastes generated on its installation. This plan provides waste programs management policies and procedures for the proper management of hazardous and other wastes generated during installation operations. The Hazardous Waste Management Plan, in conjunction with the installation's Spill Prevention, Control, and Counter Measure Plan (Dobbins ARB 2010c) and Stormwater Pollution Prevention Plan for Municipal and Industrial Activities (Dobbins ARB 2010d), provides guidance in reducing the amount of hazardous wastes generated and properly managing hazardous wastes to avoid environmental contamination.

Dobbins ARB operates as a large-quantity generator (LQG) of hazardous waste under RCRA. LQGs generate more than 1,000 kilograms (kg) of hazardous waste, or more than 1 kg of acutely hazardous waste, per month. Hazardous wastes that might be present at the Dobbins ARB include asbestos and lead-based paint (LBP), radon, regulated wastes, petroleum products, and solid wastes (Dobbins ARB 2011g).

Environmental Restoration Programs

The Defense Environmental Restoration Program (DERP) was formally established by Congress in 1986 to provide for the cleanup of DOD properties at active installations, BRAC installations, and formerly used defense sites (FUDS) throughout the United States and its territories. The three restoration programs under the DERP are the IRP, Military Munitions Response Program (MMRP), and Building Demolition/Debris Removal (BD/DR). The IRP requires each installation to identify, investigate, and clean up contaminated sites. The MMRP addresses nonoperational military ranges and other sites that are suspected or known to contain unexploded ordnance, discarded military munitions, or munitions constituents. BD/DR involves the demolition and removal of unsafe buildings and structures. Eligible DERP sites include those contaminated by past defense activities that require cleanup under CERCLA, as amended by the Superfund Amendments and Reauthorization Act, and certain corrective actions required by RCRA. Non-DERP sites are remediated under the Compliance-Related Cleanup Program (CRP).

Dobbins ARB has ten IRP sites, six of which are closed and are designated as No Further Action Planned to Industrial Levels. Of the remaining four sites, two lack State concurrence and two sites are in the beginning stages of the investigation process. Based on the information found within the EBSs, none of these ten IRP sites are within the boundaries of the four site alternatives. No MMRP or BD/DR sites occur at Dobbins ARB at the time of this study (Dobbins ARB 2011g).

Asbestos-Containing Materials

According to the USEPA, asbestos is a mineral fiber that has been used commonly in a variety of building construction materials for insulation and as a fire-retardant. Asbestos is regulated by USEPA under CAA, TSCA, and CERCLA. USEPA has established that any material containing more than 1 percent asbestos by weight is considered an asbestos-containing material (ACM). Friable ACM is any material containing more than 1 percent asbestos, and that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is any ACM that does not meet the criteria for friable ACM.

USEPA and OSHA regulate the remediation of ACM. Emissions of asbestos fibers to ambient air are regulated by Section 112 of the CAA (42 U.S.C. 7401–7671g), as promulgated by 40 CFR 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants).

AFI 32-1052, *Facilities Asbestos Management*, provides the direction for asbestos management at USAF installations. It requires installations to develop an asbestos management plan for the purposes of maintaining a permanent record of the status and condition of ACM in installation facilities, and documenting asbestos management efforts. In addition, the instruction requires installations to develop an asbestos operating plan detailing how the installation accomplishes asbestos-related projects. The Dobbins ARB Asbestos Operations and Management Plan was last revised in September 2009 (Dobbins ARB 2009b).

Lead-Based Paint

According to the USEPA, lead is a toxic metal that was used for many years in paint and other products. LBP was commonly used until banned in 1978 by the Federal government. Therefore, it is assumed that all structures constructed prior to 1978 could contain LBP.

USAF policy and guidance establishes LBP management at USAF facilities. The policy incorporates by reference the requirements of 29 CFR 1910.120, 29 CFR Part 1926, 40 CFR 50.12, 40 CFR Parts 240 through 280, the CAA, and other applicable Federal regulations. In addition, the policy requires each installation to develop and implement a facility management plan for identifying, evaluating, managing, and abating LBP hazards. The Residential Lead-Based Paint Hazard Reduction Act of 1992, Subtitle B, Section 408 (commonly called Title X) regulates the use and disposal of LBP on Federal facilities. Federal agencies are required to comply with applicable Federal, state, and local laws relating to LBP activities and hazards. Dobbins ARB Lead Based Paint Management Plan is implemented on installation and describes procedures for managing any LBP identified at the installation (Dobbins ARB 2007c).

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are a group of chemical mixtures used as insulators in electrical equipment such as transformers and fluorescent light ballasts. Federal regulations govern items containing 50 to 499 ppm of PCBs. Chemicals classified as PCBs were widely manufactured and used in the United States throughout the 1950s and 1960s. PCB-containing oil is typically found in older electrical transformers and light fixtures (ballasts). Transformers containing greater than 500 ppm of PCBs, between 50 and 500 ppm of PCBs, and less than 50 ppm of PCBs are considered PCB, PCB contaminated, and non-PCB, respectively.

Radon

Radon is a naturally occurring radioactive gas found in soils and rocks. It comes from the natural breakdown or decay of uranium. Radon has the tendency to accumulate in enclosed spaces that are usually below ground and poorly ventilated (e.g., basements). Radon is an odorless, colorless gas that has been determined to increase the risk of developing lung cancer. In general, the risk increases as the level of radon and length of exposure increase.

USEPA has established a guidance radon level of 4 picoCuries per liter (pCi/L) in indoor air for residences; however, there have been no standards established for commercial structures. Radon gas accumulations greater than 4 pCi/L are considered to represent a health risk to occupants. The USEPA designated radon potential in Cobb County, Georgia, is Radon Zone 1, which has the highest potential for radon above 4 pCi/L (Dobbins ARB 2011g).

Dobbins ARB and AFP-6 have been surveyed for indoor radon. All radon samples taken during the surveys were below 4 pCi/L, so the surveys concluded that there is a low probability of indoor radon exceeding 4 pCi/L (Dobbins ARB 2010g; Dobbins ARB 2011d, f, and g).

Pesticides

Pest management practices at Dobbins ARB are addressed in the installation's Integrated Pest Management Plan (Dobbins ARB 2010b). Dobbins ARB's pest management practices mainly focus on controlling mosquitoes, yellow jackets, wasps, honey bees, fire ants, cockroaches, spiders, ants, termites, nuisance weeds, Canada geese, mice, and rats. Chemicals used for pest management are stored and mixed in Building 509 of the installation's Civil Engineering complex. Dobbins ARB consider pesticides to be hazardous materials and, as such, they are subject to all regulations of hazardous materials (Dobbins ARB 2010b).

4.10. SAFETY

4.10.1. DEFINITION OF THE RESOURCE

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Human health and safety address (1) workers' health and safety during demolition activities and facilities construction, (2) public safety during demolition and construction activities and during subsequent operations of those facilities, and (3) aircraft and flight safety. Aircraft safety focuses on matters such as the potential for aircraft mishaps, airspace congestion, bird-aircraft strike hazards, munitions handling and use, flight obstructions, weather, and fire risks (Dobbins ARB 1999).

Construction site safety requires adherence to regulatory requirements imposed for the benefit of employees. It includes implementation of engineering and administrative practices that aim to reduce risks of illness, injury, death, and property damage. The health and safety of onsite military and civilian workers are safeguarded by numerous DOD and military branch specific regulations designed to comply with standards issued by OSHA, USEPA, and state occupational safety and health agencies. These standards specify health and safety requirements, the amount and type of training required for workers, the use of personal protective equipment (PPE), administrative controls, engineering controls, and permissible exposure limits for workplace stressors.

4.10.2. AFFECTED ENVIRONMENT

Contractor Safety. Worker and public safety is a key issue at any construction site and military installation. All contractors performing construction activities at Dobbins ARB are responsible for following ground safety regulations and worker compensation programs and are required to conduct construction activities in a manner that does not pose any risk to its workers or installation personnel. An industrial hygiene program addresses exposure to hazardous materials, use of PPE, and availability of Material Safety Data Sheets. Industrial hygiene is the responsibility of contractors. Contractor responsibilities are to review potentially hazardous workplace operations; to monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; to recommend and evaluate controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures (Dobbins ARB 1999).

Fire Hazards and Public Safety. The Dobbins Fire and Emergency Services provides fire, rescue, HAZMAT, and medical services at the installation in compliance with AFI 32-2001. In addition to Dobbins ARB Fire and Emergency services, private outside contractors could be called in to provide emergency services for HAZMAT spill-related incidents but only after the initial Dobbins ARB services' response. The 94th Security Forces Squadron handles security and police duties at the installation in accordance with AFI 31-201 and AFI 31-101. Other Federal agencies and local municipalities may assist the 94th Security Forces Squadron but only if needed. Individuals, supervisors, managers, and

commanders are expected to give full support to safety efforts. Safety awareness and strict compliance with established safety standards are expected. In the event of a mishap, the installation will investigate the incident, document lessons learned, and take corrective action. The installation enforces strict security policies and enforcement procedures and is fully enclosed by a chain-link fence (Dobbins ARB 1999).

Explosives and Munitions Safety. Explosive safety zone/clearance zones must be established around facilities used for the storage, handling, or maintenance of munitions. Air Force Manual 91-201, *Explosives Safety Standards*, establishes the size of the clearance zones based on quantity-distance criteria or the category and weight of the explosives contained within the facility. Explosive safety zones currently exist at Dobbins ARB. The largest safety zone is south of the runway at AFP-6.

Protection of Children. Since children can suffer disproportionately (i.e., more so than adults due to physiological and behavioral differences) from environmental health risks and safety risks, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* was signed by President Clinton in 1997. The intent of EO 13045 was to prioritize the identification and assessment of environmental health risks and safety risks that could affect children and to ensure that Federal agencies' policies, programs, activities, and standards address environmental health and safety risks to children.

Children live in the vicinity of Dobbins ARB. The facility has taken precautions to prevent children from unknowingly gaining access to the installation and to construction sites. There is no military family housing on the installation and therefore, no children reside on the installation. Children could be on the installation as visitors of family members and guests of Reservists and installation employees. Children must be under adult supervision while visiting Dobbins ARB. A small playground is located at the Big Lake Recreation Area for children's use.

4.11. SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

4.11.1. DEFINITION OF THE RESOURCE

Socioeconomic Resources. Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly characteristics of population and economic activity. Regional birth and death rates and immigration and emigration affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these fundamental socioeconomic indicators typically result in changes to additional socioeconomic indicators, such as housing availability and the provision of public services. Socioeconomic data at county, state, and national levels permit characterization of baseline conditions in the context of regional, state, and national trends.

Demographics, employment characteristics, and housing occupancy status data provide key insights into socioeconomic conditions that might be affected by a proposed action. Demographics identify the population levels and the changes in population levels of a region over time. Demographics data might also be obtained to identify a region's characteristics in terms of race, ethnicity, poverty status, educational attainment level, and other broad indicators. Data on employment characteristics identify

gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region can be used to compare the “before” and “after” effects of any jobs created or lost as a result of a proposed action. Housing statistics provide baseline information about the local housing stock, the percentage of houses that are occupied, and the ratio of renters to homeowners. Housing statistics allow for baseline information to evaluate the impacts a proposed action might have upon housing in the region.

In appropriate cases, data on an installation’s expenditures in the regional economy help to identify the relative importance of an installation in terms of its purchasing power and influence in the job market.

Socioeconomic data shown in this section are presented at census tract, city, county, state, and national levels to characterize baseline socioeconomic conditions in the context of regional and state trends.

Environmental Justice. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires that Federal agencies’ actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was created to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, tribal, and local programs and policies.

Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Such information aids in evaluating whether a proposed action would render vulnerable any of the groups targeted for protection in the EO.

4.11.2. AFFECTED ENVIRONMENT

For the purposes of this socioeconomic analysis, the Region of Influence (ROI), defined as Dobbins ARB and the surrounding area, which includes, the City of Marietta, Cobb County, the county within which Dobbins ARB is located, Atlanta-Sandy Springs-Marietta Metropolitan Statistical Area (MSA), and the State of Georgia.

Demographics. 2000 and 2010 population data for the five spatial levels are presented in Table 4-2. All of the spatial levels have population increase rates considerably higher than the United States baseline with the exception of the City of Marietta, which actually had a population decrease. Cobb County’s population growth can be attributed to a tremendous growth in residential and commercial activity, direct access to four interstates (I-75, I-20, I-285, and I-575), and investments in educational facilities (Dobbins ARB 2010a).

4.11.3. TABLE 4-2. POPULATION DATA FOR 2000 AND 2010

	2000	2010	Percent Change
ROI	N/A	22,696	N/A
The City of Marietta	58,748	56,579	-3.7%
Cobb County	607,751	688,078	13.2%
Atlanta-Sandy Springs-Marietta MSA	4,247,981	5,268,860	24.0%
Georgia	8,186,453	9,687,653	18.3%
United States	281,421,906	308,745,538	9.7%

Sources: U.S. Census Bureau 2010c, U.S. Census Bureau 2010d, U.S. Census Bureau 2010e,
U.S. Census Bureau 2010f, Harvard 2010

Employment Characteristics. As of 2010, the percentage of persons employed in the armed forces was 0.8 percent in the ROI, 0.3 percent in the City of Marietta, 0.2 percent in Cobb County, 0.2 percent in the Atlanta-Sandy Springs-Marietta MSA, 0.8 percent in Georgia, and 0.5 percent in the United States. Interestingly, the percent of persons employed by the armed forces is the lowest in Cobb County despite the existence of Dobbins ARB. Construction is the most prevalent occupation in the ROI. For the City of Marietta, Cobb County, and the Atlanta-Sandy Springs-Marietta MSA, the most common occupations are professional, scientific, management, administrative and waste management services. Retail sale is the most prevalent occupation in Georgia and the United States (U.S. Census Bureau 2010b).

As of October 2010, Dobbins ARB has an estimated annual economic impact of \$181,712,924 on the region. It has an average annual payroll of \$93,841,157, annual expenditures of \$39,403,533, and the estimated annual value of jobs created is \$48,468,234. The installation is responsible for 2,547 direct and 878 indirect employees. Indirect jobs are estimated nonactive duty positions created by the installation (Dobbins ARB 2010f). Additionally, Dobbins ARB makes a considerable contribution to the local economy through direct employment and purchases from local businesses. In 2005, 88 percent of the total payroll was spent within a 50-mile radius of the installation (Dobbins ARB 2010a).

As of 2010, the average unemployment rate for the ROI was 7.33 percent (U.S. Census Bureau 2010b). The City of Marietta has had higher than baseline (i.e., Georgia) unemployment rates from 2001 to 2004. From 2004 to 2007, the City of Marietta had unemployment rates on par with the baseline, and from 2007 to 2011 their unemployment rates have been generally slightly lower than the baseline. The City of Marietta surpassed the 10 percent unemployment mark in February, September, and October 2010. Cobb County has generally maintained unemployment rates slightly lower than the baseline for the past decade. Unemployment rates (not seasonally adjusted) in the Atlanta-Sandy Springs-Marietta MSA and Georgia have been tightly aligned for the past decade. The monthly unemployment rates for the Atlanta-Sandy Springs-Marietta MSA and Georgia have been intermittently higher than 10 percent since June 2009.

Housing Characteristics. The housing occupancy rate in the ROI is relatively low and the owner occupancy rate is considerably low. Similarly, the City of Marietta also has a relatively low owner occupancy percentage and the second lowest occupancy percentage. The other spatial levels have occupancy percentages similar to the national average. It is worth noting that the Atlanta-Sandy Springs-Marietta MSA contains 53 percent of the housing units in Georgia (U.S. Census Bureau 2010b).

Environmental Justice. Minority population levels within the ROI are considerably higher than minority levels in all other spatial levels. The ROI's population reporting to be a race other than white was 58.9 percent, which is greater than the City of Marietta (47.3 percent), Cobb County (37.8 percent), the Atlanta-Sandy Springs-Marietta MSA (44.6 percent), Georgia (40.3 percent), and the United States (27.6 percent). The Hispanic or Latino population in the ROI was also considerably higher than all other spatial levels. Minority populations in all spatial levels are higher than for the United States (U.S. Census Bureau 2010b). The poverty status for individuals in the ROI is considerably higher than that of all other spatial levels. Likewise, the per capita income and median household income for the ROI is lower than in the other spatial levels. The ROI has a greater percentage of individuals under 5 years old than all other spatial levels (U.S. Census Bureau 2010b).

5. IMPACTS OF PROPOSED ACTION ON THE ENVIRONMENT

This section addresses the potential environmental consequences associated with the Proposed Action. The following terms describes how environmental and socioeconomic resources impacts are categorized in this EA.

Short-term or long-term. These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term effects are those that would occur only with respect to a particular activity or for a finite period, such as during the time required for construction or installation activities. Short-term effects are more likely to be acute, whereas long-term effects are more likely to be persistent and chronic.

Direct or indirect. A direct effect is caused by and occurs contemporaneously at or near the location of the action. An indirect effect is caused by a proposed action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action. For example, a direct effect of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of the same erosion might lead to lack of spawning and result in lowered reproduction rates of indigenous fish downstream.

Negligible, minor, moderate, or major. These relative terms are used to characterize the magnitude or intensity of an impact. Negligible effects are generally those that might be perceptible but are at the lower level of detection. A minor effect is slight, but easily detectable. A moderate effect is readily apparent. A major effect is one that is severely adverse or exceptionally beneficial.

Adverse or beneficial. An adverse effect is one having adverse, unfavorable, or undesirable outcomes on the man-made or natural environment. A beneficial effect is one having positive outcomes on the man-made or natural environment. A single act might result in adverse effects on one environmental resource and beneficial effects on another resource.

Significance. Significant effects are those that, in their context and due to their intensity (severity), meet the thresholds for significance set forth in CEQ regulations (40 CFR 1508.27).

Context. The context of an effect can be localized or more widespread (e.g., regional).

Intensity. The intensity of an effect is determined through consideration of several factors, including whether an alternative might have an adverse impact on the unique characteristics of an area (e.g., historical resources, ecologically critical areas), public health or safety, or endangered or threatened species or designated critical habitat. Effects are also considered in terms of their potential for violation of Federal, state, or local environmental law; their controversial nature; the degree of uncertainty or unknown effects, or unique or unknown risks; if there are precedent-setting effects; and their cumulative effects.

Context and intensity are taken into consideration in determining a potential impact's significance, as defined in 40 CFR Part 1508.27.

5.1. AIR QUALITY

No Adverse Impact

Construction Emissions Estimates. Short-term, adverse effects on air quality would be expected from the construction associated with the airfield stormwater repair; however, the effects would not be significant. The construction activities associated with the repair would generate air pollutant emissions from site-disturbing activities such as grading, filling, compacting, trenching, and operation of construction equipment. Construction activities would also generate particulate emissions as fugitive dust from ground-disturbing activities and from the combustion of fuels in construction equipment and hauling of materials to the site. Fugitive dust emissions would be greatest during the initial site preparation activities and would vary from day to day depending on the work phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of activity. Construction activities would incorporate best management practices (BMPs) and control measures (e.g., frequent use of water to suppress dust from dust-generating activities) to minimize fugitive particulate matter emissions.

General Conformity. This action has been reviewed for General Conformity with the Georgia State Implementation Plan (SIP). This review concluded that the requirements of General Conformity do not apply to this action because the maximum annual total direct and indirect emissions of this action are estimated to be below de minimis levels based on the size and scope of the action. The action is not regionally significant based on annual regional emissions for the region around Dobbins ARB.

5.2. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE

Positive impacts include the reduced Bird-Aircraft Strike Hazard Reduction (BASH) hazard. The repair will minimize any standing water problems on the runway or water impoundments in the infield area that attract birds which are a hazard to aircraft.

5.3. NOISE

No Adverse Impact.

Construction Noise. Noise from construction activities varies depending on the type of equipment being used, the area that the action would occur in, and the distance from the noise source. As shown in Table 5-1, construction usually involves several pieces of equipment (e.g., trucks and bulldozers) that can be used simultaneously. Under the Proposed Action, the cumulative noise from the construction equipment, during the busiest day, was estimated to determine the total impact of noise from construction activities at a given distance. These sound levels were predicted at 50, 100, 200, 400, 800, and 1,200 feet from the source of the noise.

Table 5-1. Predicted Noise Levels from Construction Activities

Distance from Noise Source	Predicted Noise Level
50 feet	89 dBA
100 feet	83 dBA
200 feet	77 dBA
400 feet	71 dBA
800 feet	65 dBA
1,200 feet	61 dBA

The noise from construction equipment would be localized, short-term, and intermittent during machinery operations. Heavy equipment would be used periodically during construction; therefore, noise levels from the equipment would fluctuate throughout the day.

Construction activities under the Proposed Action would result in short-term, minor, adverse impacts on the noise environment in the vicinity of construction activities. However, noise generation would last only for the duration of construction activities and would diminish as they moved farther away from the receptor. Noise generation could be minimized by restricting construction to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.) and the use of measures such as equipment exhaust mufflers. It is not anticipated that the short-term increase in ambient noise levels from the Proposed Action would cause significant adverse effects on the surrounding populations.

5.4. LAND USE

No Adverse Impact

The Proposed Action would not preclude the viability of existing land uses, or the continued use and occupation of areas surrounding it. The Proposed Action will repair existing in place. Therefore, it would result in no impacts on existing land use viability or continued land occupation. Additionally, the Proposed Action would not violate local zoning ordinances and municipal zoning regulations do not apply to Federal property. Therefore, the Proposed Action would not result in any impacts on municipal land use plans or policies.

5.5. GEOLOGICAL RESOURCE

No Adverse Impact

The Proposed Action is a replacement of existing in place. Therefore, impacts on geology and soils would be insignificant.

5.6. WATER RESOURCES

Minimal Impact

The Proposed action will result in an improved and more sustainable storm water management system infrastructure. However, impacts to jurisdictional wetlands and streams are anticipated. Dobbins ARB will minimize the impact to jurisdictional wetlands and streams by adhering to conditions set forth in USACE Permit SAS-2010-00461. These conditions are special operating procedures which will be incorporated during construction. Special operating procedures differ from mitigation in that the former are designed to prevent negative impacts during the implementation of an action while the latter remediate impacts that occur as a result of the implementation.

Positive impacts include minimize any standing water problems on the runway or water impoundments in the infield area that attract birds which are a hazard to aircraft.

5.7. BIOLOGICAL RESOURCES

No Adverse Impact

No federally listed threatened, endangered, or candidate species or Georgia DNR special concern species have been documented within the site location. Therefore, no impacts on federally or state-listed species would be expected from the implementation of the Proposed Action.

5.8. CULTURAL RESOURCES

No Adverse Impact

There are no cultural resources within the site location. Thus, no significant impacts on cultural resources would be expected.

5.9. INFRASTRUCTURE RESOURCES

No Adverse Impact

The Proposed Action will not result in adverse impacts on electrical power, natural gas, liquid fuels, central heating and cooling, potable water, sanitary sewer/wastewater, communications, and solid waste systems. The Proposed Action will provide a benefit to the stormwater system.

5.10. HAZARDOUS MATERIALS AND WASTE

No Adverse Impact

No known or anticipated activities other than minimal construction materials such as small quantities of fuels and lubricants would be on site for equipment during the project. Impacts will be insignificant. All current Dobbins ARB waste management procedures and capacities will be followed. Thus, the Proposed Action will not result in adverse impacts to workers, residents, or visitors to hazardous materials or wastes.

5.11. SAFETY

No Adverse Impact

The Proposed Action will not result in adverse impacts to contractor safety, fire hazards and public safety, explosives and munitions safety, or children. Positive impacts include the reduced Bird-Aircraft Strike Hazard Reduction (BASH) hazard. The repair will minimize any standing water problems on the runway or water impoundments in the infield area that attract birds which are a hazard to aircraft.

5.12. SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE

No Adverse Impact

The Proposed Action will not result in adverse impacts to the local economy, low-income or minority population.

5.13. SAFETY AND OCCUPATIONAL HEALTH

Positive Impact. Repairing the stormwater drainage system will provide a safer environment during aircraft flights in and out of Dobbins ARB. By eliminating standing water areas on the airfield will reduce the potential for a bird/wildlife aircraft strike hazard (BASH) incident.

5.14. HAZARDOUS MATERIALS/WASTE

For hazardous materials, there will be negligible short term effect caused by the increased use of equipment and vehicles during construction. No hazardous waste generation is expected from the action.

5.15. BIOLOGICAL RESOURCES

No Impact

No threatened or endangered species will be impacted by the Proposed Action.

5.16. CULTURAL RESOURCES

No Impact

No cultural resources will be impacted by the Proposed Action.

5.17. GEOLOGY AND SOILS

No Impact

No negative impacts are expected.

5.18. SOCIOECONOMIC

No Impact

No negative impacts are expected. Similar construction activities were not noted as having negative impacts on these populations.

6. CUMULATIVE AND OTHER POTENTIAL ADVERSE IMPACTS

CEQ regulations stipulate that the cumulative effects analysis in an EA should consider the potential environmental effects resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR Part 1508.7). CEQ guidance in considering cumulative effects affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with a proposed action. The scope must consider other projects that coincide with the location and timetable of a proposed action and other actions. Cumulative effects analyses must also evaluate the nature of interactions among these actions (CEQ 1997).

6.1. PROJECTS IDENTIFIED FOR POTENTIAL CUMULATIVE EFFECTS

The scope of the cumulative effects analysis involves both timeframe and geographic extent in which effects could be expected to occur, and a description of what resources could be cumulatively affected. For the purposes of this analysis, the geographic area for consideration of cumulative effects is Dobbins ARB and Cobb County, including the City of Marietta.

Construction of Marietta Trail System Multi-Use Trail. The City of Marietta has proposed to construct a multi-use trail within the University segment of the Marietta Trail System. The multi-use trail would travel along South Cobb Drive southeast into Southern Polytechnic State University and connect to an existing trail just north of Wildwood Park on Life University property. This trail then connects to A.L. Burruss Park to the south (City of Marietta 2010b).

The Operation of a Joint Forces Headquarters (JFHQ) at the General Lucius D. Clay National Guard Center, Cobb County, Georgia. The Georgia Air National Guard completed construction of the JFHQ in 2012. The JFHQ is an approximately 17-acre site in the northwestern portion of the General Lucius D. Clay National Guard Center in Cobb County, adjacent to the south of Dobbins ARB. The facility includes a 215,000-ft² multi-story building, onsite parking areas, sidewalks, an access road, exterior fire protection, lighting, a flagpole, and other ancillary facilities. The JFHQ accommodates the relocation of elements of the Headquarters, Headquarters Detachment of the Georgia State Area Command, the 124th Mobile Public Affairs Detachment, and the 118th Personnel Service Detachment of the Georgia Air National Guard; headquarters elements of the Georgia Air National Guard; and multiple departments of the Georgia DOD (Dobbins ARB 2009d).

Expansion of Lockheed Martin Aeronautics Material Recycling Facility. Lockheed Martin has proposed to expand and use an existing recycling facility that is at the central-southern edge of Site 3. The recycling facility is not currently operating and upgrades would need to be completed prior to its use. The design of the proposed facility has not been finalized, but the existing building would be expanded, a loading dock and asphalt parking lot/yard would be constructed, and an existing gravel road to the east and south of the proposed site would be widened and paved (Dobbins ARB 2011h).

Dobbins ARB General Plan Projects. The Dobbins ARB General Plan is intended to guide the installation's long-range development by providing an assessment of on-installation conditions, and recommendations for improvements and future development of the installation. The General Plan outlines future facility and infrastructure requirements that will enhance mission support capability (Dobbins ARB 2010a). These requirements are identified as a list of planned, programmed, and recommended projects in the General Plan's finding and recommendations. There are six major programmed projects identified in the General Plan. A summary of these projects is presented in Table 6-1.

Table 6-1. Summary of Dobbins ARB Projects in the Area of the Proposed Action

Project Title	Description	Status
Construction of New Fire Station/Security Forces Complex	A new fire station/security forces complex would be constructed immediately northeast of the existing Fire Station (Building 745). The proposed joint facility would combine the administration and the 24-hour operations of both services, and would provide a state-of-the-art facility for emergency response personnel. The facility would consist of a multi-story building with drive-through bays for fire engines, living quarters for firefighters, administrative offices and storage for the fire department and security forces, and a consolidated emergency dispatch center. Combination of the fire department and security forces allows Dobbins ARB to comply with AFI 10-2501, which requires integration of the emergency dispatch and Base Defense Operating Center functions. The existing Fire Station (Building 745) would be demolished immediately following completion and occupation of the new facility.	Programmed
Construction of New Fitness Center	A new fitness center would be constructed in the North Area to replace the existing outdated and undersized facility. The proposed facility would include men's and women's locker rooms with sauna, a cardiovascular and stretching area, a gymnasium with basketball/volleyball court and spectator seating area, racquetball courts, and a resistance and free weights training area. The facility would also include a lobby and administrative and support offices, a conference room, group exercise rooms, a laundry area, support storage, and equipment repair area. The existing fitness center would be demolished after construction of the new facility.	Programmed
Construction of AFRC Contingency Training Center	An AFRC Contingency Training Center would be constructed that could accommodate both Civil Engineering Expeditionary Combat Support Training – Certification Center and Force Support Combat Training, and a joint and interagency use. The AFRC Contingency Training Center would require a consolidated schoolhouse with contiguous functions and accessibility between housing, classrooms, and administration; troop billeting/student housing (open bay/hooch) and shower-and-shave facility; an open area for field training and field-training activities (field lodging; designated areas for specific field-training exercises; and pads for erecting field kitchens, tents, and billeting tents); runway minimum requirement (5,000-foot-long-by-75-foot-wide area); and Airfield Damage Repair pavement pads. The proposed site is the Army Reserve area southeast of the runway, and the alternate site is the Cobb County Legacy Golf Course adjacent to the southeast boundary of the installation.	Programmed

Project Title	Description	Status
Renovation of Wing Headquarters Building	Building 922 would be renovated to become the new Wing Headquarters. The renovation activities would include the removal of existing walls to provide an open office layout that will provide additional usable space, and other interior improvements, resurface parking lots, and relocate a fire hydrant. Wing Headquarters staff functions are currently in four geographically separated buildings, which result in reduced efficiency. Functions from Buildings 838, 727, 737, and 827 would be relocated to Building 922.	Programmed
Relocation of 700th Airlift Squadron	The 700th Airlift Squadron (700 AS) would be relocated to Bay 1 of Building 838 after Wing Headquarters functions have departed (see “Renovation of Wing Headquarters Building”). This relocation would consolidate 700 AS Operations into a single facility on the flightline and provide adequate space for operational activities associated with its new mobility mission. Some structural changes to Bay 1 might be required to accommodate this function.	Programmed
Recreation Area/Lodging Campus Projects	Several projects would be implemented on the North Area after the AFRC Contingency Training Center is relocated (see “Construction of AFRC Contingency Training Center and Alternative”). The recreational projects include relocation and expansion of the Family Campgrounds, construction of a Frisbee golf course, relocation of the Rental Center, and construction of the new Fitness Center (see “Construction of New Fitness Center”). In addition to the recreation projects, a Lodging and Conference Facility would be constructed along Gym Road. The lodging facility would include space for 95 visitor rooms (each with a private bath), 5 distinguished visitor suites, lobby, vending, public restrooms, a front desk area, office/break area, storage areas, and a laundry room.	Programmed

Source: Dobbins ARB 2010a

6.2. RESOURCE-SPECIFIC CUMULATIVE EFFECTS

6.2.1. PROPOSED ACTION

Noise. All projects identified in Section 6 would result in short-term, adverse impacts on the ambient noise environment in the northwestern corner of Dobbins ARB and nearby off-installation receptors, including residences, due to construction activities. The projects identified in Section 6 are a considerable distance away from the Proposed Action and it is unlikely that noise generated from the construction and operation of the Proposed Action would be heard at the other project sites. Therefore, when the noise impacts from Proposed Action are combined with the noise impacts of projects identified in Section 6, no cumulative impacts would be expected.

Land Use. Most projects identified in Table 6-1 would likely not result in land use impacts as the projects would be constructed on property with similar or compatible land uses. Implementation of the Proposed Action and the other projects identified in Section 6.1 could result in short-term, minor, adverse cumulative impacts on noise-sensitive land uses, and long-term, minor to moderate, adverse cumulative impacts on land use plans and policies.

Air Quality. Past and current development and stationary and mobile sources at Dobbins ARB and in Cobb County have impacted regional and local air quality and future activities in these areas would continue to impact local and regional air quality. It is likely that the projects identified in Table 6-1 would result in short-term, adverse impacts on air quality due to generation of particulate emissions as fugitive dust from ground-disturbing activities during construction, and generation of criteria pollutant air emissions from vehicular traffic of construction equipment and commuting construction workers. Emissions from construction activities would be produced only for the duration of work activities, and would likely not be significant.

Geological Resources. Past development activities at Dobbins ARB and the surrounding Cobb County have extensively modified geological resources, particularly soils, and current development activities continue to alter the soils. While several projects identified in Table 6-1 would occur on fully or partially developed land or previously disturbed land, continued development on Dobbins ARB and within the City of Marietta would impact soils and topography locally. This could occur through ground-disturbing activities such as grading, excavation, and recontouring of the soils, which could result in increased soil compaction and erosion.

The Proposed Action would impact soils through site-disturbing construction activities and increases to impervious surfaces resulting in short-term and long-term, minor, adverse impacts resulting in compacted soils, increased erosion and sedimentation, and possible changes in drainage patterns. However, the majority of the soils have been previously disturbed and modified by development, and thus impacts from the Proposed Action would not be significant. In addition, soil erosion, stormwater, and sediment-control measures would be included in the site plan to minimize these impacts.

When combined with impacts from other projects, permanent but localized effects of the components of the Proposed Action would result in long-term, negligible, adverse, cumulative impacts on geological resources.

Water Resources. While several projects identified in Table 6-1 would occur on fully or partially developed land, their implementation would further increase impervious surface area and, thereby, would have the potential to increase stormwater runoff and erosion and sedimentation into surface waters. Potential increases in sedimentation and other water resource degradation from development projects would be alleviated through the use of BMPs, and would likely be minimized through the use of design criteria and stormwater management controls designed to comply with NPDES permit requirements.

Implementation of the Proposed Action will result in negligible to minor, adverse impacts on water resources including groundwater, surface water, and wetlands. The Proposed Action would increase impervious surfaces and compact soil that could result in localized changes in drainage and infiltration patterns that could affect groundwater quality and recharge. The quality of surrounding surface water and wetlands could be affected by increased stormwater runoff and possible spills or leaks.

The Proposed Action would combine with other past and future development to produce long-term, minor, adverse, cumulative impacts on water resources.

Biological Resources. Existing development and operations on Dobbins ARB and in Cobb County currently impact vegetation and wildlife. Since several projects identified in Table 6-1 would occur on fully or partially developed land or previously disturbed land. Development would eliminate some areas that are currently vegetated, while revegetation of disturbed areas with native species would replace some areas of nonnative vegetation schemes and weedy areas. Conversion of existing open space to facilities would reduce wildlife habitat; however, that habitat is of low quality on Dobbins ARB due to former use.

Past development at Dobbins ARB, in conjunction with the urban expansion and development in Cobb County, has degraded historic habitat of both sensitive and common species. The Proposed Action, in conjunction with past and future development both on and off the installation, would result in an overall long-term, minor, adverse, cumulative impact on biological resources. Cumulative actions are causing reduction in habitat and permanent loss of vegetation.

Cultural Resources. The potential impacts of the projects identified in Table 6-1 on cultural resources are not known. Impacts on cultural resources resulting from projects at Dobbins ARB are likely to be minimal, if at all, due to the previously disturbed nature of the installation. Impacts could occur if new construction uncovered previously undetected prehistoric sites. Because the Proposed Action would have no adverse effects on any archaeological site or culturally significant buildings or structures, there would be no cumulative impacts on cultural resources.

Safety. Construction of the projects identified in Table 6-1 could increase safety risk to contractors performing construction work; however, most of these projects would be required to develop and adhere to health and safety plans. Construction of the Fire Station/Security Forces Complex at Dobbins ARB would likely result in beneficial impacts on safety and emergency response capabilities. Short-term, minor impacts on contractor safety would be expected under the Proposed Action. Contractors would use PPE and would be required to establish and maintain safety programs that their employees must follow, which would minimize their risk. The Proposed Action would have a negligible, adverse cumulative effect on safety.

Socioeconomics and Environmental Justice. Construction of the projects in Table 6-1 would result in short-term, negligible to minor, beneficial impacts on the local economy due to increases in employment and local business volume during construction activities. The ROI has higher percentages of minority, low-income, and Hispanic or Latino populations than the State of Georgia; therefore, the cumulative projects could result in impacts on these populations due to increased traffic. However, these impacts are not likely to be significant. When combined with the other projects, the Proposed Action would not result in significant impacts.

Infrastructure. Impacts on infrastructure and utility systems due to implementation of projects identified in Table 6-1 would include possible short-term interruptions of service and long-term increased demand of utility system services. It is likely that these impacts would not be significant as service interruptions would be short in duration and only occur during demolition and construction, and increased demand could be accommodated by the existing utility system capacity. Construction activities would likely result in short-term, adverse impacts on transportation systems in the vicinity of each project due to

increased traffic from construction vehicles. This increased traffic would be intermittent and temporary; therefore, these impacts would be less than significant. It is unlikely that these projects would create significant long-term effects on transportation systems.

Hazardous Materials and Hazardous Waste Impacts from the use of hazardous materials for construction of the projects identified in Table 6-1 would depend on the quantity and nature of the materials used, both of which are unknown. However, the use of BMPs and adherence to all applicable Federal, state, and local regulations would reduce the adverse effects from their use. Hazardous waste would likely be generated during operation of some of these projects, but these impacts would be minimized by properly disposing of all hazardous wastes.

6.2.2. NO ACTION ALTERNATIVE

Under the No Action Alternative, the Proposed Action would not occur, and the existing conditions discussed in Section 3 would continue. The No Action Alternative would not result in any cumulative impacts.

6.2.3. UNAVOIDABLE ADVERSE EFFECTS

Unavoidable adverse impacts would result from implementation of the Proposed Action. However, none of these impacts would be significant.

Air Quality. Implementation of the Proposed Action would result in temporary particulate emissions due to construction and possibly demolition activities. Although unavoidable, the results of the impact analysis indicate impacts would not be significant.

Geological Resources. Under the Proposed Action, construction activities, such as grading and excavating of the ground, would result in some minor soil disturbance. Implementation of BMPs during construction would limit environmental consequences resulting from construction and demolition activities. Standard erosion-control measures would also reduce potential environmental impacts related to these characteristics. Although unavoidable, impacts on soils would not be considered significant.

Infrastructure. Solid waste would be generated as a result of construction and demolition activities. This is an unavoidable, but minor, adverse impact that can be mitigated to a certain extent by possible recycling opportunities. Minor, adverse traffic impacts would be expected as a result of the Proposed Action. These impacts would be the unavoidable consequences of implementing the Proposed Action, but are not considered significant.

Hazardous Materials and Wastes. The use of hazardous materials and the generation of hazardous wastes would be unavoidable conditions associated with the Proposed Action. Products containing hazardous materials would be procured and used during the proposed project. It is anticipated that the quantity of products containing hazardous materials used during the construction activities would be minimal and their use would be of short duration. Contractors would be responsible for the management of hazardous materials, which would be handled in accordance with Federal and state regulations. Contractors must report use of hazardous materials. It is anticipated that the quantity of hazardous wastes

generated from proposed construction activities would be negligible. Contractors would be responsible for the disposal of hazardous wastes in accordance with Federal and state laws and regulations, and the Dobbins ARB Hazardous Waste Management Plan. The potential for accidents or spills due to improper fuel handling during construction or demolition activities is an unavoidable risk associated with the Proposed Action.

Energy Resources. Energy supplies would be committed to the Proposed Action. The use of nonrenewable resources is an unavoidable occurrence, although not considered significant. The construction and demolition activities associated with the Proposed Action would require the use of fossil fuels, a nonrenewable natural resource. Relatively small amounts of energy resources would be committed to the Proposed Action and are not considered significant.

Compatibility of the Proposed Action and Alternatives with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls

The proposed construction activities would not result in any significant or incompatible land use changes on or off the installation. The Proposed Action would not directly conflict with any applicable off-installation land use ordinances or designated clear zones.

6.2.4. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use of these resources would have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals). The irreversible and irretrievable commitments of resources that would result from implementation of the Proposed Action involve consumption of material resources used for construction, energy resources, land, landfill space, and human labor resources. The use of these resources is considered to be permanent.

Material Resources. Material resources irretrievably used for the Proposed Action include steel, concrete, and other building materials. Such materials are not in short supply and would not be expected to limit other unrelated construction activities. The irretrievable use of material resources would not be considered significant.

Energy Resources. Energy resources used for the Proposed Action would be irretrievably lost. These include petroleum-based products (e.g., gasoline and diesel), natural gas, and electricity. During construction, gasoline and diesel fuel would be used for the operation of construction vehicles. Natural gas and electricity would be used by operational activities. Consumption of these energy resources would not place a significant demand on their availability in the region. Therefore, no significant impacts would be expected.

Landfill Space. The generation of construction and possibly demolition debris and subsequent disposal of that debris in a landfill would be an irretrievable adverse impact.

Biological Habitat. The Proposed Action would result in minimal, irreversible loss of vegetation and wildlife habitat. The loss would be minimal and not considered significant on a regional basis.

Human Resources. The use of human resources for construction and operation is considered an irretrievable loss, only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities and is considered beneficial.

THIS PAGE INTENTIONALLY LEFT BLANK

7. REFERENCES

- CEQ 1997 Council on Environmental Quality (CEQ). 1997. *Considering Cumulative Effects Under the National Environmental Policy Act*. January 1997.
- City of Marietta 2009 City of Marietta, Georgia. 2009. "Marietta, Georgia Code of Ordinances, Part 10, Chapter 10-6, NOISE." 11 March 2009. Available online: <<http://library.municode.com/showDocument.aspx?clientID=12224&docID=0>>. Accessed 19 January 2012.
- City of Marietta 2010b City of Marietta, Georgia. 2010. Draft Trail Map. September 2010.
- Cobb County 2008 Cobb County, Georgia. 2008. *Cobb County 2030 Comprehensive Transportation Plan Final Report*. 27 February 2008.
- Cobb County 2010 Cobb County, Georgia. 2010. "Cobb County, Georgia Code of Ordinances, Chapter 50, Article VII, NOISE." 23 February 2010. Available online: <<http://library.municode.com/showDocument.aspx?clientID=10572&docID=0>>. Accessed 19 December 2012.
- Dobbins ARB 1999 Dobbins Air Reserve Base (ARB). 1999. *Final EA/FONSI for the Environmental Assessment of the Conversion of the 700th Airlift Squadron at Dobbins Air Reserve Base, Georgia*. September 1999.
- Dobbins ARB 2004 Dobbins ARB. 2004. *Final Environmental Assessment for New Joint Armed Forces Readiness Headquarters Facility, Dobbins Air Reserve Base, Cobb County, Georgia*. 11 September 2004.
- Dobbins ARB 2007a Dobbins ARB. 2007. *Final Integrated Natural Resources Management Plan (INRMP)/Environmental Assessment (EA) for Dobbins ARB, Georgia*. Prepared for Dobbins ARB and AFCEE. Prepared by e2M. AFCEE Contract Number: F41624-03-D-8599. Task Order: 0073. June 2007.
- Dobbins ARB 2007c Dobbins ARB. 2007. *Integrated Cultural Resource Management Plan, Fiscal Years 2007-2011*. Prepared by engineering-environmental Management, Inc. 10 May 2007.
- Dobbins ARB 2007d Dobbins ARB. 2007. *Final Hazardous Material Emergency Planning and Response Plan (HAZMAT Plan) For Dobbins Air Reserve Base*. Prepared for Headquarters Air Force Reserve Command, Robins AFB, Georgia. Prepared by e2M, Apex, North Carolina. Contract Number: F41624-03-D-8599, Task Number: 0093. November 2007,

Dobbins ARB 2009a	Dobbins ARB. 2009. <i>Wetland Delineation and Stream Evaluation Report</i> . September 2009.
Dobbins ARB 2009b	Dobbins ARB. 2009. <i>Dobbins Air Reserve Base Asbestos Operations and Management Plan</i> . September 2009.
Dobbins ARB 2010a	Dobbins ARB. 2010. <i>Final General Plan</i> . HQ AFCEE Contract No. FA8903-08-D-8769, Task Order 0180. Prepared by CH2MHILL, Atlanta, Georgia. June 2010.
Dobbins ARB 2010b	Dobbins ARB. 2010. <i>Integrated Pest Management Plan</i> . October 2010.
Dobbins ARB 2010c	Dobbins ARB. 2010. <i>Spill Prevention, Control, and Countermeasure (SPCC) Plan</i> . Last revised July 2010.
Dobbins ARB 2010d	Dobbins ARB. 2010. <i>Dobbins Air Reserve Base Stormwater Pollution Prevention Plan for Municipal and Industrial Activities</i> . November 2010.
Dobbins ARB 2010f	Dobbins ARB. 2010. <i>Economic Impact Analysis for the 94th Airlift Wing at Dobbins ARB</i> . 10 November 2010.
Dobbins ARB 2011a	Dobbins ARB. 2011. <i>Forest Management Plan, FY 2007 – FY 2011 for Dobbins Air Reserve Base, Georgia</i> . Prepared for: 94th Combat Support Group, Environmental Flight, 94 SPTG/CEV, Dobbins ARB, GA and Headquarters Air Force Reserve Command, Environmental Division, AFRC/CEV, Robins AFB, GA. Prepared by: H. Warner Spence, District Forester Forest Resources Office, CESAS-RE-RT, Savannah, GA.
Dobbins ARB 2011b	Dobbins ARB. 2011. <i>2011 Air Installation Compatible Use Zone (AICUZ) Study at Dobbins Air Reserve Base, Georgia</i> . October 2011.
Dobbins ARB 2011d	Dobbins ARB. 2011. <i>Final Environmental Baseline Survey for the City Of Marietta Site Proposed For A Commissary at Dobbins Air Reserve Base, Georgia</i> . Prepared for Dobbins Air Reserve Base and Air Force Reserve Command. December 2011.
Dobbins ARB 2011f	Dobbins ARB. 2011. <i>Draft Environmental Baseline Survey for the Barclay Gate Site Proposed For A Commissary at Dobbins Air Reserve Base, Georgia</i> . Prepared for Dobbins Air Reserve Base and Air Force Reserve Command. December 2011.
Dobbins ARB 2011g	Dobbins ARB. 2011. <i>Final Environmental Baseline Survey for the Corps Lab Site Proposed For A Commissary at Dobbins Air Reserve Base, Georgia</i> . Prepared for Dobbins Air Reserve Base and Air Force Reserve Command. November 2011.
Dobbins ARB 2011h	Dobbins ARB. 2011. <i>Lockheed Martin Aeronautics Material Recycling Facility: Option 1, Facility Layout</i> . 3 August 2011.
DOD 2010a	Department of Defense (DOD). 2010. Memorandum from Dorothy Robyn (Office of the Under Secretary of Defense) regarding DOD Implementation of Stormwater Requirements under Section 438 of the Energy Independence and Security Act. 19 January 2010.

DOD 2010b	DOD. 2010. <i>Unified Facilities Criteria (UFC): Low Impact Development</i> . 6 April 2010.
FICON 1992	Federal Interagency Committee on Noise (FICON). 1992. <i>Federal Agency Review of Selected Airport Noise Analysis Issues</i> . August 1992.
Harvard 2010	Harvard University. 2010. "Diversity Data - Atlanta-Sandy Springs-Marietta, GA." Available online: < http://diversitydata.sph.harvard.edu/Data/Profiles/Show.aspx?loc=124 >. Accessed 22 December 2011.
State of Georgia 2011	State of Georgia. 2011. "Official Code of Georgia." Available online: < http://www.lexisnexis.com/hottopics/gacode/ >. Accessed 25 January 2012.
U.S. Census Bureau 2010b	U.S. Census Bureau. 2010. "American FactFinder." Available online: < http://factfinder2.census.gov/main.html >. Accessed 22 December 2011.
U.S. Census Bureau 2010c	U.S. Census Bureau. 2010. "Cobb County, Georgia QuickFacts." Available online: < http://quickfacts.census.gov/qfd/states/13/13067.html >. Accessed 22 December 2011.
U.S. Census Bureau 2010d	U.S. Census Bureau. 2010. "Marietta (City), Georgia QuickFacts." Available online: < http://quickfacts.census.gov/qfd/states/13/1349756.html >. Accessed 22 December 2011.
U.S. Census Bureau 2010e	U.S. Census Bureau. 2010. "Georgia QuickFacts." Available online: < http://quickfacts.census.gov/qfd/states/13000.html >. Accessed 22 December 2011.
U.S. Census Bureau 2010f	U.S. Census Bureau. 2010. "USA QuickFacts." Available online: < http://quickfacts.census.gov/qfd/states/00000.htm >. Accessed 22 December 2011.
USAF 2005	USAF. 2005. <i>Integrated Cultural Resources Management Plan, Air Force Plant 6, Marietta, Georgia 2006-2010</i> . United States Air Force, Aeronautical Systems Center, Wright Patterson Air Force Base, Ohio and Air Force Plant 6, Marietta, Georgia. Prepared by Geo-Marine, Inc., San Antonio, Texas. September 2005.
USAF 2010	USAF. 2010. <i>Environmental Baseline Survey Update for Air Force Plant 6, Marietta, Georgia</i> . Prepared by AECOM for the USAF. May 2010.
USEPA 2008	USEPA. 2008. "National Emissions Inventory, NEI Browser Search by State and County." Available online < http://neibrowser.epa.gov/eis-public-web/geo/search.html >. Accessed 4 January 2012.
USEPA 2009	USEPA. 2009. <i>Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act</i> . December 2009.

- USEPA 2011b USEPA. 2011. “40 CFR Part 81 – Designation of Areas for Air Quality Planning Purposes, Subpart B – Designation of Air Quality Control Regions, Sec. 81.45 Metropolitan Atlanta Air Quality Control Region.” Available online <http://edocket.access.gpo.gov/cfr_2002/julqtr/40cfr81.45.htm>. Accessed on 6 January 2012.
- USEPA 2011c USEPA. 2011. “40 CFR Part 81 – Designation of Areas for Air Quality Planning Purposes, Subpart C – Section 107 Attainment Status Designations, Sec. 81.311 Georgia, Cobb County.” Available online <<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=6a9e1aaa6783730fa7f12026b7511806&rgn=div8&view=text&node=40:17.0.1.1.1.3.1.12&idno=40>>. Accessed on 6 January 2012.
- USGS 2011b USGS. 2011. “Earthquake Hazards Program: Georgia Seismic Hazard Map.” Available online <<http://earthquake.usgs.gov/earthquakes/states/georgia/hazards.php>>. Accessed 27 December 2011.

8. APPENDICES

- A. Interagency and Intergovernmental Coordination for Environmental Planning, and Public Involvement Correspondence
- B. USACE Permit SAS-2010-00461 with drawings

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix A

THIS PAGE INTENTIONALLY LEFT BLANK



DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE

23 October 2012

MEMORANDUM FOR DISTRIBUTION

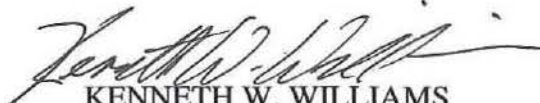
FROM: 94 MSG/CE
884 Industrial Drive
Dobbins ARB, Georgia 30069

SUBJECT: Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) for an Environmental Assessment Addressing the Proposed Project, Repair Airfield Stormwater System at Dobbins Air Reserve Base, Georgia

1. The Air Force Reserve Command (AFRC) is proposing to repair the airfield stormwater system at Dobbins Air Reserve Base (ARB).
2. The purpose of the Proposed Action is to improve the buried stormwater infrastructure, which in many sections of the Airfield has reached or exceeded its designed useful life cycle. The airfield has been in use for over 70 years, and the runways and taxiways have been lengthened and facilities expanded multiple times, the storm water runoff has been greatly increased and the existing outfall system cannot adequately handle the flows. Repair of the drainage system is required to prevent further deterioration, increase capacities, reduce erosion problems, and reduce future maintenance cost. Additionally the repair will minimize any standing water problems on the runway or water impoundments in the infield area that attract birds which are a hazard to aircraft.
3. Under the No Action Alternative, Dobbins ARB would not repair the airfield stormwater system. As a result, the high velocities calculated in the stormwater system over time will cause further pipe separations, soil erosion at joints and cracks, and severe outlet structure undermining. These decaying pipes are undermining the downstream sections of the system, causing cave-ins, and collapse of the pipe itself, with potential damage to the runways/taxiways. The concrete pipe's joint failures, with resultant water and sediment infiltration will warrant repairs to avoid cave-in and increased sediment transported into area streams. These conditions, if not repaired could cause substantial loss to Air Force resources including administrative facilities, large aircraft and lives.
4. The EA will be prepared to evaluate the Proposed Action and the No Action Alternative. Resources that will be considered in the impacts analysis are noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomic resources and environmental justice, infrastructure, hazardous materials and waste management, and safety.

5. The environmental impact analysis process for the Proposed Action and appropriate alternatives is being conducted by Headquarters Air Force Reserve Command in accordance with the Council on Environmental Quality's guidelines pursuant to the requirements of the National Environmental Policy Act (NEPA). The U.S. Air Force's implementing regulation for NEPA is its *Environmental Impact Analysis Process* that is detailed in 32 Code of Federal Regulations Part 989, as amended.

6. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation by reviewing this letter and solicit your comments concerning the proposal and any potential environmental issues of concern to you. We request that you send comments or information you would like considered during preparation of the Draft EA directly to the undersigned at 901 Industrial Drive, Dobbins ARB, Georgia, 30069 within 30 days from the date of this letter. In addition, please indicate if you are interested in receiving a copy of the Draft EA, once it is available, or if someone else within your organization other than you should receive the Draft EA. Attachment 1 of this letter provides a list of other contacted stakeholders. Your prompt attention to this request would be greatly appreciated. If members of your staff have any questions, please contact my POC, Mr. Mark Floyd at (678) 655-3549.


KENNETH W. WILLIAMS
Base Civil Engineer

Attachments:

1. IICEP Distribution List
2. Project Drawing

Attachment 1

IICEP Distribution List:

U.S. Fish and Wildlife Service
Southeast Region, Region 4
1875 Century Blvd., Suite 400
Atlanta, GA 30345

Georgia Environmental Protection Division
Georgia Department of Natural Resources
2 Martin Luther King Jr. Drive
Suite 1152, East Tower
Atlanta, GA 30334

Cobb County Soil and Water Conservation District
678 South Cobb Drive, Suite 150
Marietta, GA 30060

Attachment 2

Project Drawing



KEY NOTES

- | | | |
|---|--|---|
| ① NEW STORM PIPE INSTALLATION | ⑤ ABANDON IN PLACE EXISTING STORM PIPE | ⑨ 170 LF SECONDARY IMPACT STREAM (S10) BUFFER ENCROACHMENT NW3 MAINTENANCE PERMIT REQUIRED. STREAM BUFFER VARIANCE ALSO REQUIRED. |
| ② DEMOLISH, REMOVE & REPLACE EXISTING STORM PIPE WITH NEW STORM PIPE IN SAME LOCATION | ⑥ DEMOLISH & REMOVE EXISTING STORM PIPE | ⑩ 100 LF STREAM (S3C) RESTORATION NW27 PERMIT REQUIRED |
| ③ JACK & BORE FOR NEW STORM PIPE INSTALLATION | ⑦ NEW CONCRETE FLUME | |
| ④ OPEN CUT FOR NEW STORM PIPE INSTALLATION | ⑧ 12,997 SF (0.30 AC) PERMANENT WETLAND IMPACT PERMIT REQUIRED | |



500 0 500 1000 FEET
SCALE: 1" = 500'

100% SUBMITTAL

NO.	DATE	DESCRIPTION



CIVIL ENGINEERING
94th AIR REFUELING WING
DOBBINS AIR RESERVE BASE, GEORGIA



MERRICK & COMPANY
ENGINEERS, ARCHITECTS, PLANNERS
1000 W. BROAD ST., SUITE 100
ALBUQUERQUE, NM 87102
PHONE: (505) 263-1100
FAX: (505) 263-1101
WWW.MERRICK-AND-COMPANY.COM

**NOT
ISSUED FOR
CONSTRUCTION**

M/R AIRFIELD STORM WATER SYSTEM
PROJECT NO. 03016378
PROJECT LOCATION
DOBBINS AIR RESERVE BASE, GEORGIA
OVERALL CONSTRUCTION PLAN
PROJECT OWNER
CONTRACT NO. 03016378

PROJECT	PROJECT NO.	03016378
LOCATION	PROJECT LOCATION	DOBBINS AIR RESERVE BASE, GEORGIA
DRAWING	OVERALL CONSTRUCTION PLAN	
DATE	DATE	JUNE 2011
DRAWING	7 OF 88	

C-006

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix B

THIS PAGE INTENTIONALLY LEFT BLANK



DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
1590 ADAMSON PARKWAY, SUITE 200
MORROW, GEORGIA 30260-1777

REPLY TO
ATTENTION OF:

CEV File No. 24-D-06-A
Project No. 04-0014
On 24 July 12 Permit was
received by 94 MSG/CEV.
MDF

July 6, 2012

Regulatory Division
SAS-2010-00461

Mr. Mark Floyd
Dobbins Air Reserve Base
901 Industrial Drive
Dobbins ARB, Georgia 30069

Dear Mr. Floyd:

I refer to the Pre-Construction Notification submitted on June 14, 2012, requesting verification for use of Nationwide Permits (NWP) No. 12, 13, and 03(a). As currently proposed, the project was previously verified on July 25, 2011. The project involves maintenance improvements associated with the existing airfield stormwater drainage system at the Dobbins ARB, as detailed in the enclosed "M/R Airfield Storm Water System – FGWB 04-0014A/B, Dobbins Air Reserve Base, Georgia – Storm Drainage Plan (Drawings 'C-101', 'C-105', 'C-106', 'C-110', 'C-122', 'C-501', 'C-505', 'C-506', 'C-510', and 'C-522')", dated June 2011, and prepared by Merrick & Company.

Regulated activities associated with this project include installation of a new concrete headwall and extension of a culvert, resulting in the loss of 0.3 acres of wetland ("Wetland 111b"). This activity is requested for verification under NWP No. 12. Adverse impacts to 170 linear feet (LF) of perennial stream ("Stream S-10") and 100 LF of ephemeral stream ("Stream S-3c") will be incurred in association with streambank stabilization activities. Vegetated gabion revetments will be utilized for this application. These activities are requested for verification under NWP No. 13. In addition, replacement of approximately 2,400 LF of existing stormwater pipe (originally installed circa 1943) will be performed within the footprint of the airfield. These maintenance activities are requested for verification under NWP No. 03(a). The project site is located at Dobbins ARB, Cobb County, Georgia (latitude 33.9178, longitude -84.5163). This project has been assigned number SAS-2010-00461, and it is important that you refer to this number in all communication concerning this matter.

The wetlands/other waters on the subject property may be waters of the United States within the jurisdiction of Section 404 of the Clean Water Act (CWA) (33 United States Code (U.S.C.) 1344). The placement of dredged or fill material into any waterways and/or their adjacent wetlands or mechanized land clearing of those wetlands could require prior Department of the Army authorization pursuant to Section 404.

We have completed coordination with other federal and state agencies as described in

Part C (31)(d) of our NWP Program, published in the February 12, 2012, Federal Register, Vol. 77, No. 34, Pages 10184-10290 (77 FR). The NWPs and Savannah District's Regional Conditions for NWPs can be found on our web site at http://www.sas.usace.army.mil/regulatory/Nationwide_Permits.html. During our coordination procedure, no adverse comments regarding the proposed work were received.

As a result of our evaluation of your project, we have determined that the proposed activity is authorized under NWPS No. 12, 13, and 03(a), as described in Part B of the NWP Program. Your use of this NWP is valid only if:

- a. The activity is conducted in accordance with the information submitted and meets the conditions applicable to the NWP, as described at Part C of the NWP Program and the Savannah District's Regional Conditions for NWPs.
- b. Prior to the commencement of any work in jurisdictional waters of the United States for this activity, you will purchase 2.4 wetland mitigation credits from a USACE approved wetland mitigation bank that services the project area. You or the mitigation bank must provide this office with documentation of this purchase before any work may commence. The notice should reference the USACE file number assigned to this project.
- c. The Permittee shall notify the Project Manager, via email, as to the date of commencement of operations not less than 14 calendar days prior to commencing work. Such notification must allow inspection of the work during the construction process in order to ensure that the authorized activity is being or has been accomplished in accordance with the terms and conditions of the permit.
- d. All work conducted under this permit shall be located, outlined, designed, constructed and operated in accordance with the minimal requirements as contained in the Georgia Erosion and Sedimentation Control Act of 1975, as amended. Utilization of plans and specifications as contained in the "Manual for Erosion and Sediment Control, First Edition, 2002," published by the Georgia Soil and Water Conservation Commission or their equivalent, will aid in achieving compliance with the aforementioned minimal requirements.
- e. The permittee shall minimize bank erosion and sedimentation in construction areas by utilizing Best Management Practices for stream corridors, installing and maintaining significant erosion and sediment control measures, and providing daily reviews of construction and stream protection methods. Check dams and riprap placed in streams and wetlands as erosion control measures are considered a fill and not authorized under this permit unless they were specifically authorized by this permit. Materials utilized for streambank stabilization must be of sufficient composition to reasonably prevent migration into adjacent streams and/or wetlands.

f. You shall obtain and comply with all appropriate federal, state, and local authorizations required for this type of activity. A stream buffer variance may be required. Variances are issued by the Director of the Georgia Environmental Protection Division (Georgia EPD), as defined in the Georgia Erosion and Sedimentation Control Act of 1975, as amended. It is our understanding that you may obtain information concerning variances at the Georgia EPD's web site at www.gaepd.org or by contacting the Watershed Protection Branch at (404) 675-6240.

g. You fill out and sign the enclosed certification and return it to our office within 30 days of completion of the activity authorized by this permit.

This proposal was reviewed in accordance with Section 7 of the Endangered Species Act. Based on the information we have available, we have determined that the project would have no effect on any threatened or endangered species nor any critical habitat for such species. Authorization of an activity by a NWP does not authorize the "take" of threatened or endangered species. In the absence of separate authorization, both lethal and non-lethal "takes" of protected species are in violation of the Endangered Species Act. See Part (C) of 77 FR for more information.

This verification is valid for a period of two years from the date of this letter, or until the NWP is modified, reissued or revoked. All of the existing NWPs are scheduled to expire on March 18, 2017. It is incumbent upon you to remain informed of changes to the NWPs. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

This authorization should not be construed to mean that any future projects requiring Department of the Army authorization would necessarily be authorized. Any new proposal, whether associated with this project or not, would be evaluated on a case-by-case basis. Any prior approvals would not be a determining factor in making a decision on any future request.

Revisions to your proposal may invalidate this authorization. In the event changes to this project are contemplated, I recommend that you coordinate with us prior to proceeding with the work.

This communication does not relieve you of any obligation or responsibility for complying with the provisions of any other laws or regulations of other federal, state or local authorities. It does not affect your liability for any damages or claims that may arise as a result of the work. It does not convey any property rights, either in real estate or material, or any exclusive privileges. It also does not affect your liability for any interference with existing or proposed federal projects. If the information you have submitted and on which the USACE bases its

determination/ decision of authorization under the NWP is later found to be in error, this determination may be subject to modification, suspension, or revocation.

Thank you in advance for completing our Customer Survey Form. This can be accomplished by visiting our web site at <http://per2.nwp.usace.army.mil/survey.html> and completing the survey on-line. We value your comments and appreciate your taking the time to complete a survey each time you have interaction with our office. If you have any questions, please call Adam F. White, Regulatory Specialist, Piedmont Branch, at 678-422-2730.

Sincerely,

A handwritten signature in cursive script, appearing to read "Philip A. Shannin, Acting for".

Philip A. Shannin
Chief, Permits Section, Piedmont Branch

Enclosures

Regulatory Division

CERTIFICATION OF COMPLIANCE
WITH
DEPARTMENT OF THE ARMY
NATIONWIDE PERMIT NO. (12, 13 & 03(A))

PERMIT FILE NUMBER: SAS-2010-00461

PERMITTEE NAME AND ADDRESS: Mr. Mark Floyd, Dobbins Air Reserve Base, 901 Industrial Drive,
Dobbins ARB, Georgia 30069.

LOCATION OF WORK: The project site is located at Dobbins ARB, Cobb County, Georgia
(latitude 33.9178, longitude -84.5163).

PROJECT DESCRIPTION: The project involves maintenance improvements associated with the existing airfield stormwater drainage system at the Dobbins ARB, as detailed in the enclosed "M/R Airfield Storm Water System – FGWB 04-0014A/B, Dobbins Air Reserve Base, Georgia – Storm Drainage Plan (Drawings 'C-101', 'C-105', 'C-106', 'C-110', 'C-122', 'C-501', 'C-505', 'C-506', 'C-510', and 'C-522')", dated June 2011, and prepared by Merrick & Company. Regulated activities associated with this project include installation of a new concrete headwall and extension of a culvert, resulting in the loss of 0.3 acres of wetland ("Wetland 111b"). This activity is requested for verification under NWP No. 12. Adverse impacts to 170 linear feet (LF) of perennial stream ("Stream S-10") and 100 LF of ephemeral stream ("Stream S-3c") will be incurred in association with streambank stabilization activities. Vegetated gabion revetments will be utilized for this application. These activities are requested for verification under NWP No. 13. In addition, replacement of approximately 2,400 LF of existing stormwater pipe (originally installed circa 1943) will be performed within the footprint of the airfield. These maintenance activities are requested for verification under NWP No. 03(a).

WATERS OF THE US IMPACTED: 0.3 acres of wetland and 270 LF of stream

DATE WORK IN WATERS COMPLETED: _____

COMPENSATORY MITIGATION REQUIRED: 2.4 wetland mitigation credits

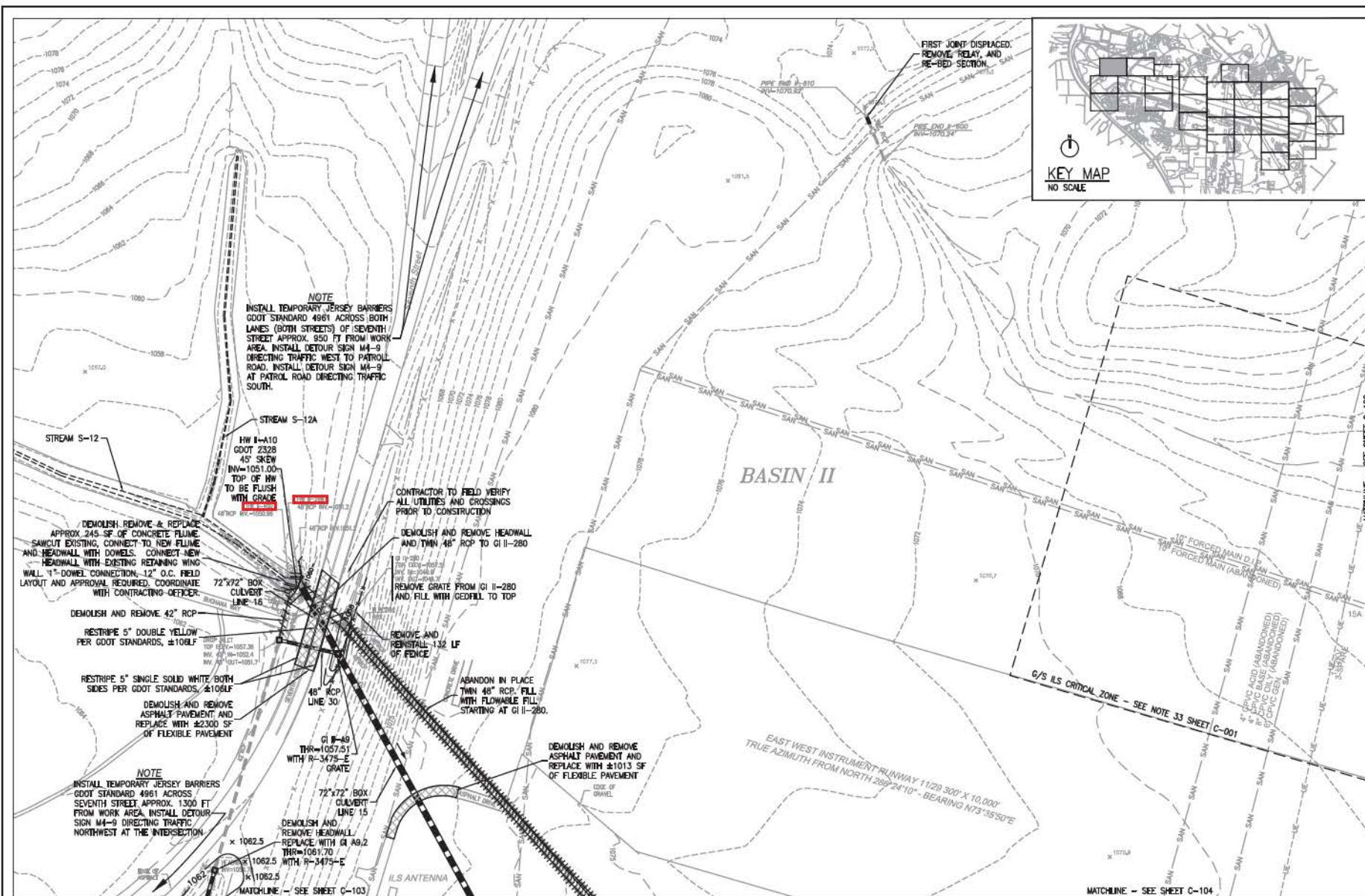
DATE COMPLETED OR PURCHASED (include name of bank):

I understand that the permitted activity is subject to a US Army Corps of Engineers' Compliance Inspection. If I fail to comply with the permit conditions at Part C of the Nationwide Permit Program, published in the March 12, 2007, Federal Register, Vol. 72, No. 42, Pages 11092-11198, it may be subject to suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced permit as well as any required mitigation (if applicable) has been completed in accordance with the terms and conditions of the said permit.

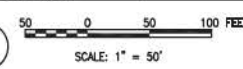
Signature of Permittee

Date



NOTES

REFER TO NOTES ON SHEET C-003.



100% SUBMITTAL

REV	DATE	DESCRIPTION



CIVIL ENGINEERING
94th AIRLIFT WING
DOBBINS AIR RESERVE BASE, GEORGIA



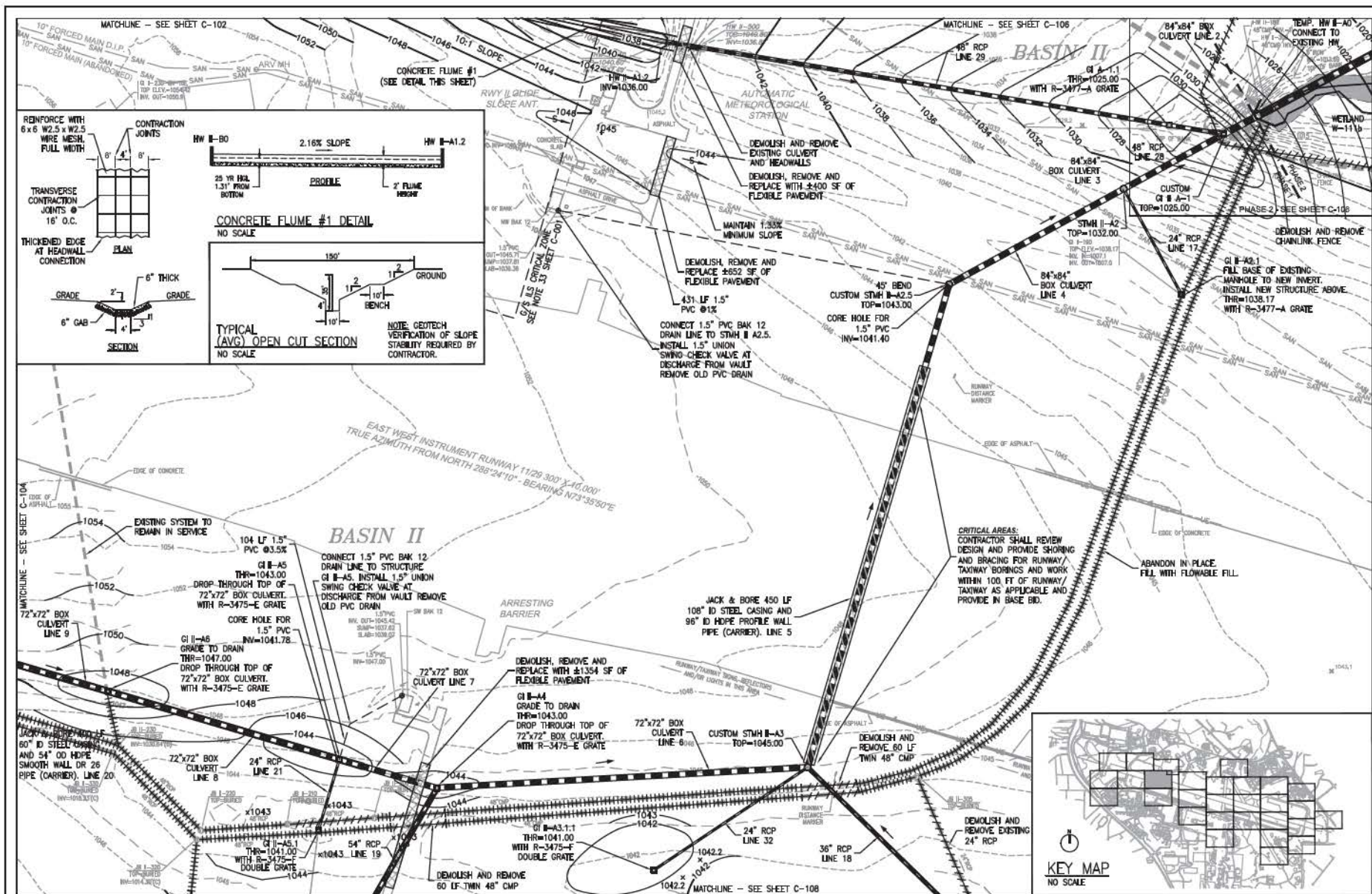
MERRICK & COMPANY
ENGINEERS, ARCHITECTS, PLANNERS
1000 W. BROAD ST., SUITE 100
ALBANY, GA 31706-4000
(706) 525-1100

NOT FOR CONSTRUCTION

M/R AIRFIELD STORM WATER SYSTEM	PROJECT NAME
94th AIRLIFT WING DOBBINS AIR RESERVE BASE, GEORGIA	PROJECT LOCATION
STORM DRAINAGE PLAN	PROJECT SHEET
CHECKED BY: (000) 000-0000	CHECKED DATE

PROJECT No. 03016378	PROJECT OFFICE
DESIGNED BY T. HARTWIGSON	DESIGNED DATE
CHECKED BY L. THOMPSON	CHECKED DATE
DATE JUNE 2011	DRAWING
0 OF 06	

C-101



NOTES

REFER TO NOTES ON SHEET C-003.



SCALE: 1" = 50'

100% SUBMITTAL

NO.	DATE/REV	DESCRIPTION



CIVIL ENGINEERING
94th AIRLIFT WING
DOBBS AIR RESERVE BASE, GEORGIA



MERRICK & COMPANY
ENGINEERS, ARCHITECTS, PLANNERS
1000 W. BROAD ST., SUITE 200
ATLANTA, GA 30334
(404) 525-1234

NOT
ISSUED FOR
CONSTRUCTION

PROJECT	LOCATION	DRAWING	CONTACT
M/R AIRFIELD STORM WATER SYSTEM	DOBBS AIR RESERVE BASE, GEORGIA	STORM DRAINAGE PLAN - PHASE 1	PROJECT ORIGINATOR
PROJECT NO.	03016378	PROJECT OFFICE	T. HARTENBERG
DESIGNED	L. THOMPSON	CHECKED	E. GOSSETT
DATE	JUNE 2011	DRAWING	12 OF 88

C-105



CIVIL ENGINEERING
94th AIRLIFT WING
NS AIR RESERVE BASE, GEORGIA

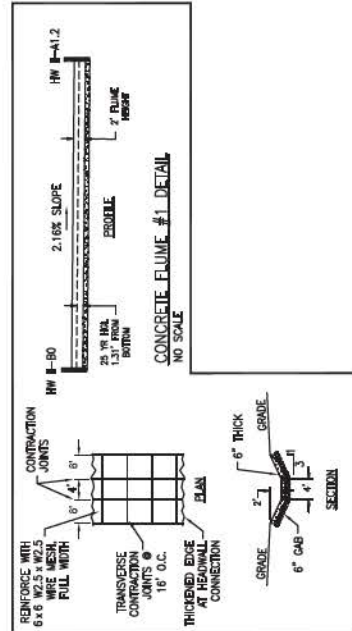
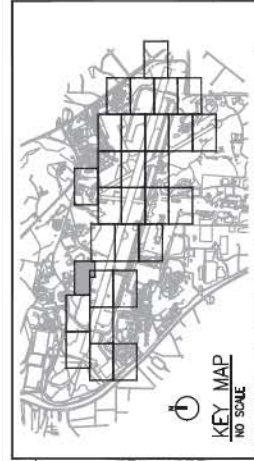


**MERRICK®
& COMPANY**
SERVED A COMPANY
20500 WEST STREET
BETHESDA, MARYLAND

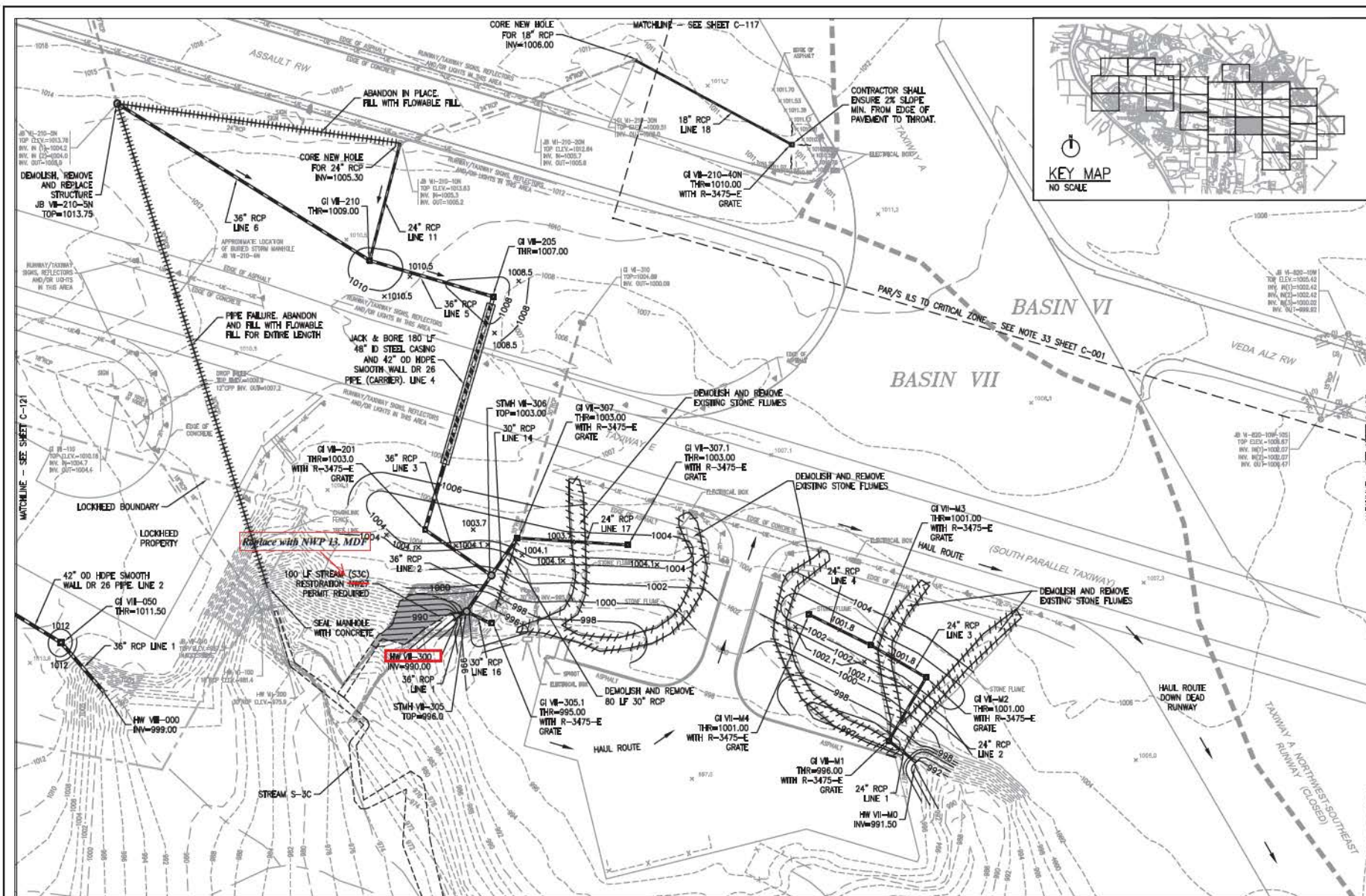
NOT
ISSUED FOR
CONSTRUCTION

PROJECT	M/R AIRFIELD STORM WATER SYSTEM
LOCATION	PCWS 04-0014A/B DOUGLAS AIR RESERVE HWY, GEORGIA
DRAWING	12.00' OF
DATE	JUNE 1911
DESIGNED BY	G. CHAFFIN
CHECKED BY	A. MATHIASON
PROJECT NO.	03-01378
CONTRACT	PROJECT CONCEPT CHECKED: HWY 5 - (HWY) 699-3551

C-106



NOTES



NOTES

REFER TO NOTES ON SHEET C-003.



50 0 50 100 FEET
SCALE: 1" = 50'

100% SUBMITTAL

REV.	DATE/REV.	DESCRIPTION



CIVIL ENGINEERING
94th AIRLIFT WING
DOBBS AIR RESERVE BASE, GEORGIA

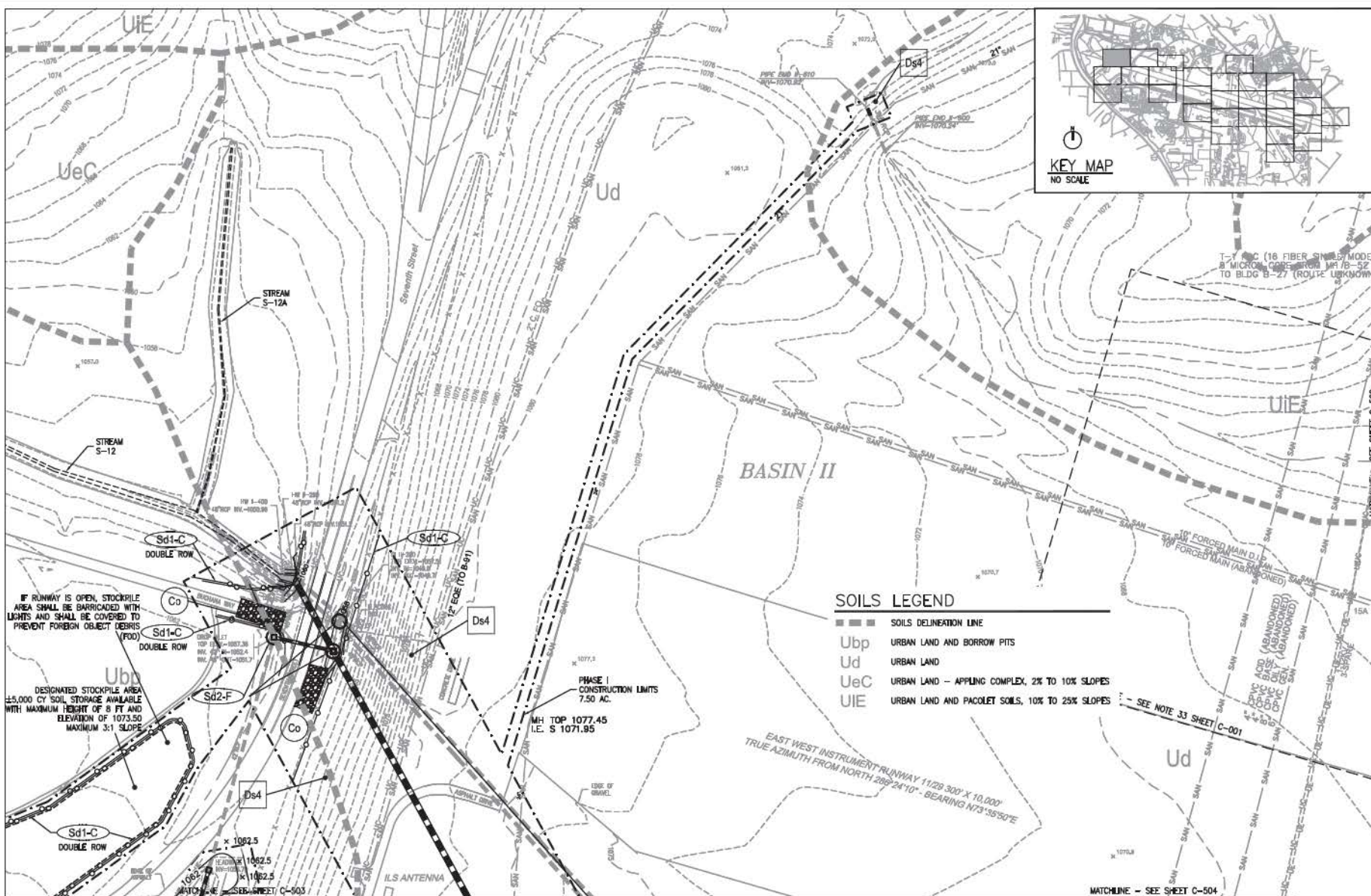


MERRICK & COMPANY
ENGINEERS, ARCHITECTS, PLANNERS
1000 W. BROADWAY, SUITE 200
ATLANTA, GEORGIA 30334
(404) 525-1234

NOT
ISSUED FOR
CONSTRUCTION

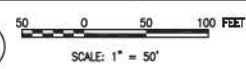
M/R AIRFIELD STORM WATER SYSTEM			
PROJECT LOCATION: 94th AIRLIFT WING, DOBBS AIR RESERVE BASE, GEORGIA			
STORM DRAINAGE PLAN			
PROJECT NUMBER: 03016378			
PROJECT	LOCATION	DRAWING	CONTACT
PROJECT NO. 03016378	PROJECT OFFICE	T. HARTWIGSON	
	DESIGNED	L. TALAMON	
	CHECKED	E. GOSWAMI	
	DATE	JUNE 2011	
	DRAWING	30 OF 88	

C-122



NOTES

REFER TO SHEET C-002 FOR LEGENDS AND ABBREVIATIONS.
REFER TO SHEET C-400 FOR EROSION CONTROL LEGEND AND NOTES.



GSNCC CERTIFICATION: C. LEE TALAMERRO, P.E. LEVEL II CERTIFICATION # 0000004993

100% SUBMITTAL

REV.	DATE	DESCRIPTION



CIVIL ENGINEERING
94th AIRLIFT WING
DOBBS AIR RESERVE BASE, GEORGIA



MERRICK & COMPANY
ENGINEERS, ARCHITECTS, PLANNERS
1000 W. BROAD ST., SUITE 200
ATLANTA, GA 30334
(404) 525-1100

NOT ISSUED FOR CONSTRUCTION

M/R AIRFIELD STORM WATER SYSTEM		PROJECT NO. 03016378	
PROJECT	LOCATION	DESIGNED BY	DATE
94th AIRLIFT WING	DOBBS AIR RESERVE BASE, GEORGIA	C. LEE TALAMERRO	JUNE 2011
DRAWN	ENGINEER	PROJECT CHECKED	CHECKED BY
L. TALAMERRO	C. LEE TALAMERRO		
DATE	SCALE	PROJECT NO.	PROJECT NO.
JUNE 2011	1" = 50'	03016378	03016378
DRAWING	NO. OF SHEETS	TOTAL SHEETS	PROJECT NO.
58 OF 68	1	1	03016378

C-501

[illegible]

CIVIL ENGINEERING
94th AIRLIFT WING
INS AIR RESERVE BASE, GEORGIA



**MERRICK®
& COMPANY**
SERVED & COMFORT
SINCE 1900

NOT
ISSUED FOR
CONSTRUCTION

M/R AIRFIELD STORM WATER SYSTEM

PROJECT	LOCATION	DRAWING	64 OF 98
DESIGNED	PROJ. OFFICER		
CHECKED	T. MARTINSON		
DATE	03016376		
	CONTACT		

C-506

GSWCC CERTIFICATION: C. LEE TALLAFERRO, P.E. LEVEL I CERTIFICATION # 0000004993



SOILS LEGEND

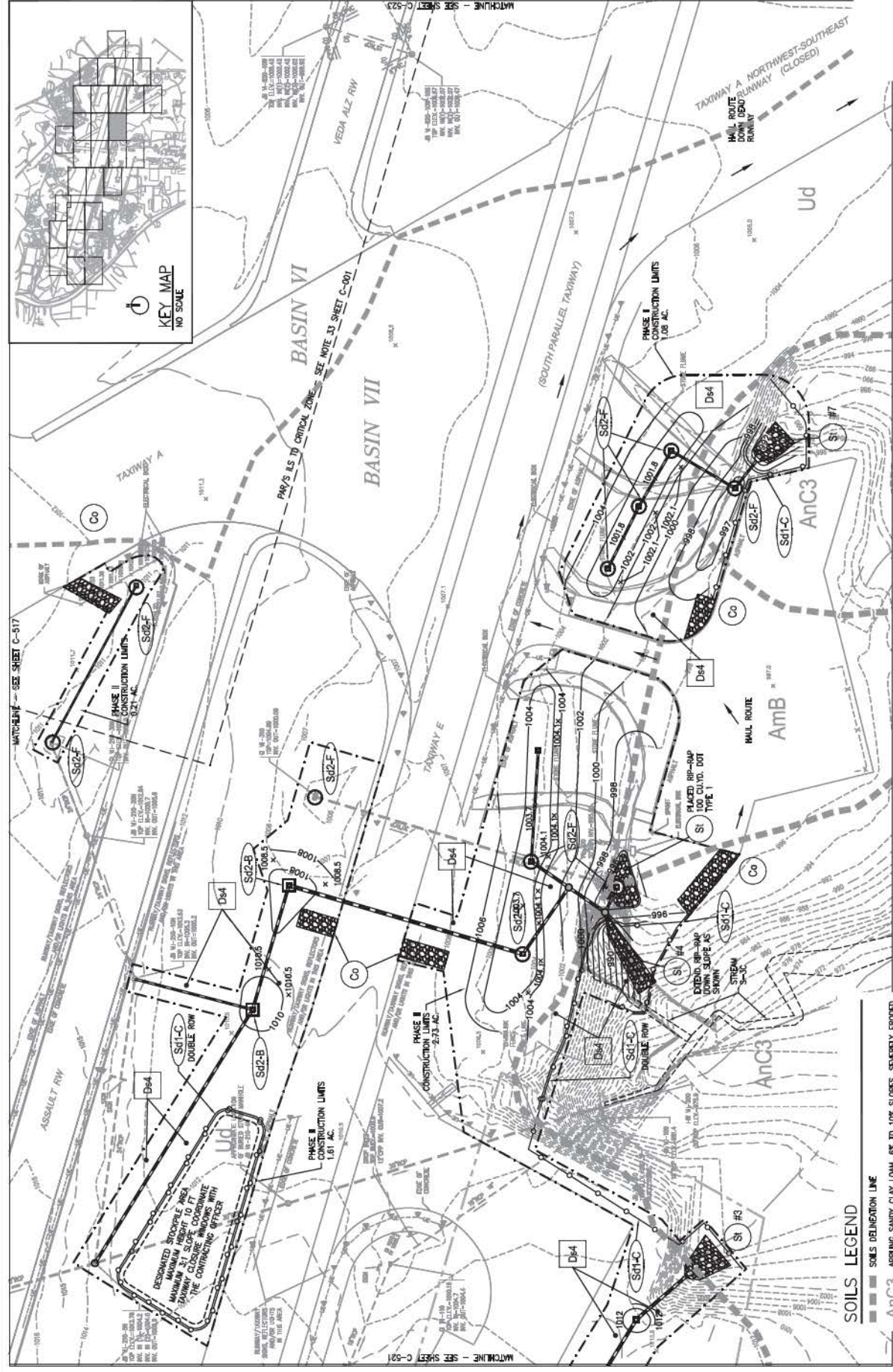
-  SOILS DELINEATION LINE
Mse2 MADISON AND PACOLET SOILS, 15% TO 25% SLOPES, ERODED
 Ubp URBAN LAND AND BORROW PITS
 Ud URBAN LAND
 W WATER

NOTES

REFER TO SHEET C-002 FOR LEGENDS AND ABBREVIATIONS.

REFER TO SHEET C-400 FOR EROSION CONTROL LEGEND AND NOTES.





NOTES

REFER TO SHEET C-002 FOR LEGENDS AND ABBREVIATIONS.

REFER TO SHEET C-400 FOR EROSION CONTROL LEGEND AND NOTES.

GSWCC CERTIFICATION: C. LEE TAJAFERRO, P.E. LEVEL 1 CERTIFICATION # 00000004993